

# Cloud Service and Managed Hosting Provider Delivers Customer Value with High-performance Multi-tenant Application Delivery

## Company:

- Peak Hosting

## Critical Issues:

- Legacy load balancers reached maximum capacity, high load balancer support ticket volume, data center efficiency and lack of customer self-service flexibility

## Selection Criteria:

- Full ADC feature set, high-performance multi-tenancy virtualization, lowest cost per connection and per Gb of throughput, and true pay-as-you grow with A10 ADC Virtual Chassis (aVCS)

## Benefits:

- Increased customer satisfaction, 25% less support calls and competitive advantage in the industry

## Results:

- Empowered customers to control their own load balancer partitions, lower TCO and decreased support tickets

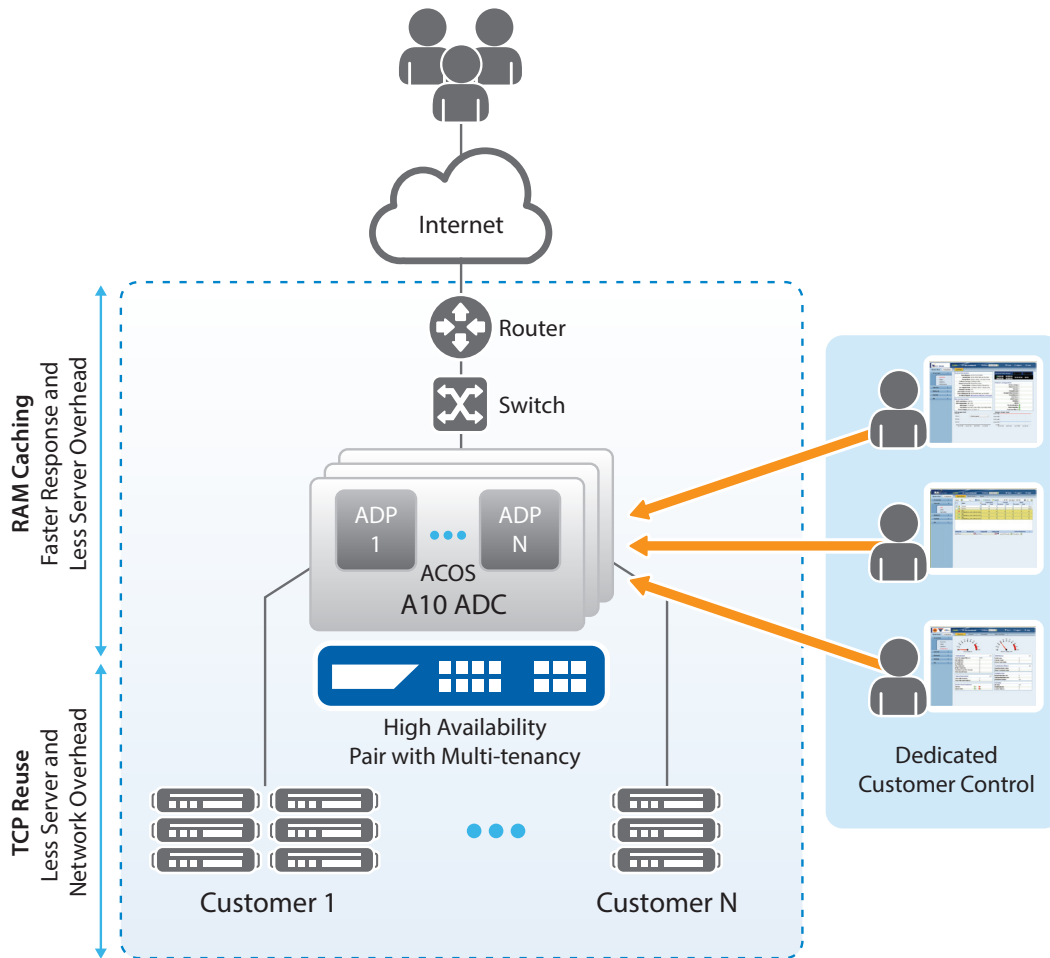
Peak Hosting, founded in 2001, provides comprehensive IT-as-a-service managed hosting and private hybrid cloud services to enterprise-level clients. Over the last decade, Peak Hosting's consultants have built fifteen of the twenty largest web properties in the world.

Peak Hosting's network is comprised of core routing from Cisco, 10 Gb distribution and top of rack switching from Brocade and firewalling from Juniper. For load balancing hundreds of servers, Peak Hosting was using Citrix NetScaler appliances. However, with Peak Hosting's constantly increasing traffic load and customer management requirements, the NetScaler solution was running out of capacity and couldn't provide the individual secure access customers demanded. While researching higher performance solutions, Peak also was on the lookout for any recent innovation that load balancers and Application Delivery Controllers (ADCs) could offer to improve the customer experience and stream-line internal operations, reducing their overall total cost of ownership.

## Reevaluating Load Balancing and the Latest Application Delivery Controller Feature Sets

During its research, Peak noticed the virtualization features touted by many vendors and immediately recognized a major potential business benefit for itself and customers. With over 25% of Peak's customer support tickets related to Virtual IP (VIP) and load balancing work, a scalable and easy to use multi-tenant solution was identified to be of the utmost importance to deliver internal efficiencies and increased customer satisfaction. Peak Hosting learned about the 64-bit ADCs from A10 Networks, with advanced feature sets including a range of virtualization and multi-tenancy options. Peak Hosting evaluated the A10 ADC alongside the latest load balancing offerings from incumbent Citrix, as well as F5 and Cisco. After testing and a detailed comparison of functionality and scalability to separate real-world operations from marketing hyperbole, Peak Hosting concluded that the A10 ADC provided the most scalable and complete multi-tenancy solution at cost points no other vendor could provide.

"As a Managed Hosting provider, we are excited about multi-tenancy as it offers customers the ability to manage their load balancing and application delivery needs directly," said Jeffrey Papen, CEO at Peak Hosting. "After evaluating competing platforms, no solution could match A10 Networks' value, which sets the bar with 128 high performance ADC instances and over four million Layer 4 connections per second per unit. Coupled with the ability to centrally manage and scale a cluster of up to eight units as we need them with a Virtual Chassis (aVCS) configuration, no vendor can match the flexibility, performance, savings and peace of mind that A10 Networks provides."



Peak Hosting ADC Refresh: Increased Customer Value and Efficiency

## The Solution: Multi-tenant Partition Features and Per Partition Performance Put A10 in Front of the Pack

After thorough evaluations, Peak Hosting learned that only A10 offered the required multi-tenancy features and functionality. Incumbent Citrix only offered a commodity PC hypervisor-based solution and its highest end servers would accommodate only 10-20 tenants per unit, which was a lower performance and higher total cost of ownership vs. dedicated High Availability (HA) appliances.

A10 offered partition-based and hypervisor-based multi-tenancy, but for the most scalable hosted solution, partition-based multi-tenancy was the ideal choice. The partition-based solution offered the highest density of high performance isolated virtualized ADC instances (up to 128) while also ensuring no additional management complexity or processing overhead was introduced by hypervisor software on commodity PC hardware. With A10, Peak Hosting could offer a multi-tenant solution while avoiding performance degradation, increased complexity, and the backplane bottlenecks of PC servers.

In addition, A10's 64-bit ADC delivered numerous other advantages; for example the A10 ADC was shown to deliver the industry's lowest cost per connection (as low as \$.04 per connection) and featured

select units with hardware assist for zero impact DDoS protection and overlapping RFC1918 private address space, removing competitors' requirements for Peak Hosting customers to renumber.

### Key features critical for Peak Hosting's environment included:

- **Application Delivery Partitions:** The A10 ADC delivers multi-tenancy through high-performance Application Delivery Partitions (ADPs). ADPs scale up to 128 partitions and 128 million concurrent users per unit. Two key features of ADPs in this deployment were the Role Based Administration (RBA) per partition and the ability to allow customers to use the same overlapping RFC 1918 address space without routing issues. This allows each partition to act as if it were a unique ADC appliance.
- **TCP Connection Reuse:** Allows multiple sessions using the same TCP socket to reduce networking load. This enhances performance as less TCP connections are used between the ADC and the web server, and large numbers of HTTP requests use far less TCP connections, offloading the network and destination server from unneeded traffic and CPU processing. TCP reuse is also referred to as TCP multiplexing.

- **High Availability:** High availability is a standard load balancer feature, but in Peak Hosting's configuration no down-time is tolerable, so stateful failover is used for sub-second failover and when maintenance is performed it is transparent and hitless.
- **Intuitive GUI:** The A10 ADCs' multi-tenancy feature includes an easy to use web-based GUI, allowing access for customers to configure their own load balancing services. As it is intuitive for the customer, Peak Hosting's engineers are freed up to work on other tasks. A full industry standard CLI is also available for Peak Hosting engineers to complement their GUI access.
- **SNMP and Reporting:** As well as in GUI statistics, Peak Hosting uses the comprehensive SNMP polling to give customers per VIP, interface, real server, protocol connection and bandwidth limit information. This also empowers the customer, again, freeing up Peak Hosting engineers for other tasks.

Peak Hosting satisfied all the requirements of the project at hand with the A10 ADC; and additional features, which are automatically included with each A10 appliance, will prove useful in the future. The A10 ADC Virtual Chassis System (aVCS) allows true pay-as-you go and grow, without license limits, allowing Peak Hosting to add up to 8 units in a centrally managed aVCS system.

## Success: The Best Value for Peak Hosting's Customers

More and more enterprises are migrating their applications to cloud based solutions where they demand the best service, optimal availability and highest performance. Despite the boom, the hosting market is extremely competitive. Therefore it is essential to be able to offer something unique in order to attract new customers and to drive down the delivery cost for existing customers, while at the same time enhancing existing services.

"A10's Application Delivery Controllers allow our customers the unique ability to drive their own application delivery configurations, which greatly reduce our Total Cost of Ownership (TCO) as our engineers do not have to spend time on simple customer issues, such as taking servers in and out of service, adjusting VIP settings and more," said Papen. "In addition, the A10 ADCs' visibility and diagnostics are unmatched, and the cost is so affordable, delivering excellent value that Peak Hosting passes on to our customers with enhanced service and lower service cost. Peak Hosting customers now

enjoy the performance and security of a hardened appliance. This value translates to a competitive advantage for us; when customers compare our competitors' incomplete offerings with free software on commodity hardware, we win. The benefits extend far beyond managed hosting providers as well. Any company with multiple business units sharing the same infrastructure will benefit from A10's partitions and management ease allowing each department to have their own load balancing solution with the cost and overhead of dedicating underutilized equipment."

With the A10 ADC's all-inclusive feature set, Peak Hosting knows there will be no surprise costs as additional services can be offered in the future, on-demand and on their schedule.

## About A10 Application Delivery Controllers

A10 ADC is a scalable, high-performance application networking platform that delivers enterprises, web properties and Internet Service Providers (ISPs) with superior reliability and an energy-efficient footprint for low total cost of ownership (TCO). With A10 ADC, customers of all sizes benefit from application availability, scalability and performance, increased infrastructure efficiency and a faster end user experience. The A10 ADC has a comprehensive Layer 4-7 feature set and flexible virtualization technologies such as A10 Networks aVCS™ Virtual Chassis System, multi-tenancy and more for public, private and hybrid cloud environments. In addition, A10 ADC leads in IPv6 migration technologies with many large-scale deployments worldwide.

A10 ADC delivers an industry-leading return on investment (ROI) by leveraging A10's 64-bit Advanced Core Operating System (ACOS), with a scalable shared-memory parallelism architecture that surpasses the competition in scalability and flexibility.

For more information, visit: [www.a10networks.com/products/application\\_delivery\\_controllers.php](http://www.a10networks.com/products/application_delivery_controllers.php)

## 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](http://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](http://www.a10networks.com/contact) or call to talk to an A10 sales representative.

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