

CLOUD HOSTER INTERMAX BALANCES SERVER LOAD WITH A10 ADCS AND MANAGES PEAK TRAFFIC WITH EASE

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Rijnier Renes | System Architect, Intermax



CASE STUDY

COMPANY

Intermax

INDUSTRY

Hosting and cloud computing services

NETWORK SOLUTION

- Thunder ADC line of Application Delivery Controllers
- AX ADC line of Application Delivery Controllers
- vThunder ADC line of virtual appliances

CRITICAL ISSUES

- Give customers superior performance under various circumstances
- Get the best price/performance combination
- Find a solution that is easy to use and maintain

RESULTS

- Application delivery controllers (ADCs) load balance heavy web traffic
- A10's non-licensing policy means no budget surprises and no need to purchase licenses during unforeseen peak loads
- Virtual appliance solutions from A10 were leveraged to provide demonstrations, proof of concepts and security testing – helping to accelerate the rollout of new services for faster time to revenue



INTRODUCTION

Intermax is a growing Dutch hosting and cloud computing provider for business-critical (web) applications, with customers in healthcare, government, media and e-commerce. For more than 20 years, the company has provided its customers with the necessary infrastructure and services to keep pace with the fast moving use of cloud services.

Rijnier Renes, System Architect at Intermax, says, "In the highly competitive hosting market, it's important that we're able to extend our business in a flexible and very scalable manner. Intermax created its own private cloud – and four data centers in the Netherlands – to offer our customers the highest possible 24/7 uptime and fulfill their continually changing needs. With customers in areas such as media and e-commerce that have high traffic and websites prone to high traffic peaks or bursts, we're constantly pushed to improve, innovate and increase our hosting services, challenging our network solutions to keep up with these demands."

CHALLENGE: STRENGTHEN THE 24/7 PERFORMANCE OF HIGH TRAFFIC WEBSITES AND CLOUD SERVICES

Because hosting and cloud computing services are increasingly business critical, Intermax is challenged to give its customers superior performance under various circumstances. In the past, the company experienced sudden moments of downtime when the service demands peaked. Analysis showed that the cause usually was application and server issues, and not network bottlenecks. To avoid and solve these problems, Intermax compared several solutions to better divide all incoming service requests across multiple servers and data centers.

"We serve customers that deploy complex e-commerce platforms and media websites that have hundreds of visitors per second and millions of visitors per month," says Renes. "They distribute large mailings and unpredictable breaking news, generating heavy traffic with high peaks. Although we have a large cloud-based hosting network, with Level 2 redundancy across four different data centers in two cities, we needed an additional solution to avoid overloading the web servers and applications of our customers. We found that solution in the application delivery controllers of A10 Networks."

"I first heard about the solutions that A10 Networks offers from a network specialist of a business partner. Of course, we also compared them with the products of other vendors. In our opinion, A10 Networks offers the best performance/price combination, due to the advanced architectural design in their ACOS operating system, which is a 64-bit Advanced Core OS. Their solution is also very easy to use and maintain, which is an important benefit for us. Last but not least, the recommendation of their business partner also influenced our decision."

SOLUTION: ADCS FOR LOAD BALANCING WEB TRAFFIC

Intermax uses multiple high availability pairs of A10 ADCs. One pair is used for internal services and customer partitions – load balancing customers' web traffic in either the Amsterdam or the Rotterdam data centers. The other pairs are dedicated to a single customer only and are located in either the Amsterdam or the Rotterdam data centers.

"In addition to load balancing, we use the dedicated SSL Offloading functionality in the ADCs for terminating thousands of SSL connections per second, which would normally overload the web servers," says Renes. "For several critical sites, we selectively use the cache to relieve always heavily loaded servers."

Each ADC is a scalable, high-performance application networking platform that can be divided into virtual ADCs (Application Delivery Partitions or ADPs) to service different customers, applications and environments.

Each ADC is a scalable, high-performance application networking platform that can be divided into virtual ADCs (Application Delivery Partitions or ADPs) to service different customers, applications and environments. Based on A10 Networks Advanced Core Operating System (ACOS®), this solution offers comprehensive Layer 4-7 functionality and virtualization technologies, such as A10 Networks aVCS® Virtual Chassis System and multi-tenancy (ADP). In addition, this solution offers advanced network security functionality, including SSL Intercept, SSL Offload, Distributed Denial of Service (DDoS) protection, Domain Name System Security Extensions (DNSSEC), Web Application Firewall (WAF), authentication and more.

Although Intermax initially selected A10 Networks' ADCs for load balancing, the company also uses A10 Networks aFleX® Deep Packet Inspection (DPI) Scripting Technology to extend application delivery functionality; for example, providing a waiting queue for new visitors (with a special landing page) to inform them that the server is busy giving services to other visitors. These kinds of service additions help customers avoid the overload of web servers for situations in which load balancing alone is not enough. Intermax can now anticipate new requirements from customers with more flexibility.

Intermax also leveraged the virtual appliance solutions from A10 to provide demonstrations, proof of concepts and security testing. A10 Networks vThunder® line of virtual

appliances gives the identical feature set to the hardware A10 Networks AX™ Series and Thunder® Series offerings, providing an excellent way to evaluate new feature and policy configuration implementations prior to their actual deployment in a production environment. This helps accelerate the rollout of new services for faster time to revenue.

NEW BUSINESS OPPORTUNITIES

“The success of our A10 solution implementation is most evident in new business opportunities, because we can now easily offer shared load balancing to customers who do not require or want to invest in their own ADCs,” says Renes. “So the A10 solution proactively helps us to generate extra business.”

For Internet Service Providers like Intermax, A10's comprehensive security and virtualization functionality offers the most flexible scalability available in the market.

“A10's non-licensing policy makes a big difference for fast growing service providers like us, so no other solution is seriously comparable in regard to price/performance,” concludes Renes. “Another advantage of the A10 ADCs is the low power consumption. Intermax is always looking for ways to become more sustainable so this feature is, of course, also a valuable differentiator.”

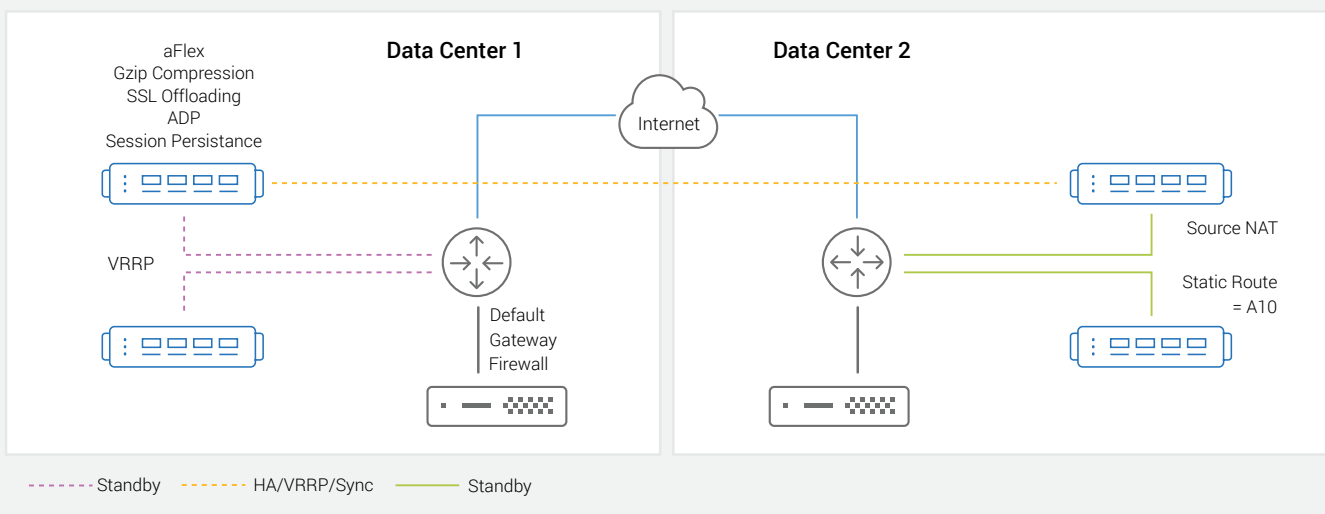


Figure 1. The A10 Networks application delivery controllers (ADCs) enable customers' applications to be highly available (through load balancing), accelerated and secure.

THE A10 SOLUTION

A10's application delivery controllers (ADCs) and Thunder TPS™ line of Threat Protection Systems provide a way to enhance service availability and optimize network infrastructure efficiency. Thunder Carrier Grade Networking (CGN) devices extend IPv4 services with Carrier Grade NAT (CGNAT), providing time and technologies to transition to IPv6. For management and oversight, A10 Networks aGalaxy® Centralized Management System provides a consolidated interface to monitor A10 devices. A10's varied product offerings for scaling, optimization and monitoring provide the most efficient hardware form factors, which ensure that your 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, visit:

www.a10networks.com/solutions/service-provider



ABOUT A10 NETWORKS

A10 Networks (NYSE: ATEN) is a Secure Application Services™ company, 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, Calif., and serves customers globally with offices worldwide.

For more information, visit: a10networks.com or tweet [@A10Networks](https://twitter.com/A10Networks).

ABOUT ACOS

The ACOS platform is an application networking software architecture optimized for 64-bit multi-core processor systems. In order to maximize the capabilities of these increasingly dense multi-core CPUs, ACOS implements a proprietary shared memory architecture that scales more efficiently than conventional memory management architectures, like inter-processor communications (IPC). This shared memory architecture enables A10 products to utilize these increasingly common multi-core CPUs efficiently and scale performance with increasing CPU cores, enabling ACOS-based products to process two to five times more web transactions in certain head to head product comparisons per unit of computing and memory resources, power, rack space or list price. For more information, visit: www.a10networks.com/acos

ABOUT INTERMAX

Established in 1994, Intermax was founded from the need for new applications in a rapidly changing world. This is still our primary motivation. We were one of the first players involved with the Internet and we have set a standard with our managed hosting solutions. We are also leaders in the field of cloud computing. In short, our managed hosting fits seamlessly within your organization, regardless of your branch or size. Additionally, we guarantee high uptimes and 24-hour support.

We invest in driven professionals who design, create, monitor and manage your IT solutions. They also continuously work on improving our services, so that you can always count on new and carefully tested techniques. Our partnerships are always centered around a long-term commitment. Intermax is the partner to think along with you and help you achieve your goals. That is why we like to offer thorough advice about the specific configuration of hardware and software that best suits your situation.

Intermax has been certified by LRQA to the international standards ISO 27001, ISO 9001 and ISO 14001. We also have a NEN 7510 certificate (the information security certificate for healthcare), an ISAE 3402 type II declaration and a DigID Third Party Notice. Our entire primary process is compliant with the most stringent norms in the area of quality, environment, security, continuity and reliability. This makes Intermax unique.

LEARN MORE
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