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LOAD BALANCER SURVIVAL TIPS BLACK FRIDAY & CYBER MONDAY

THE ANNUAL HOLIDAY SHOPPING SEASON STARTING WITH BLACK FRIDAY IS THE LITMUS TEST FOR APPLICATION AVAILABILITY AND PERFORMANCE FOR ONLINE BUSINESSES.

You want to ensure that end users have the best online experience and that your business does not suffer from unexpected application outages or performance issues. These disruptions are costly both due to lost revenue and reduced customer satisfaction. With the spotlight on shopping experiences and customers and critics using social media to share updates, high profile outages[1] can also adversely affect the reputation of the business.

For network administrators and architects this means preparing their networks and load balancers to handle demand spikes and the ability to react quickly to unexpected issues. Many IT administrators and network architects find that despite their best laid plans, things can go wrong and performance issues can bog down applications.

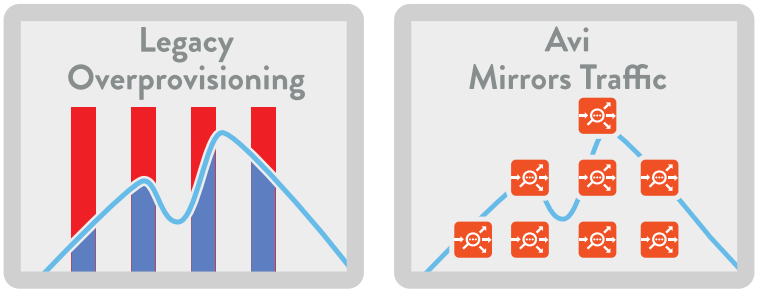
1 - Gustafson, K. (2015, November 28). Neiman Marcus suffers extended Black Friday outage. Retrieved from http://www.cnbc.com/2015/11/27/neiman-marcus-suffers-extended-black-friday-outage.html

HERE ARE TOP WAYS TO MAKE SURE THAT YOUR APPLICATION SERVICES ARE READY TO SERVE YOUR BUSINESS FOR THE BUSIEST TIME OF THE YEAR.

TOP 5 TIPS

TIP #1

ELIMINATE OVERPROVISIONING WITH ON-DEMAND SCALING

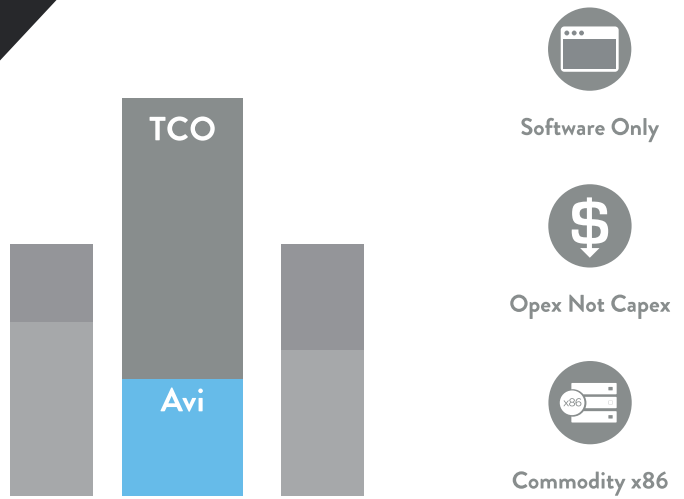


Overprovisioning of load balancers (and hence overspending) is a common complaint from network administrators. Unfortunately, network teams cannot take a chance and have to plan for the worst case traffic scenario, leading to a situation where these appliances only use a small fraction of their capacity during normal traffic levels. Many businesses purchase excess capacity for the holiday shopping season and are stuck with aging appliances after that.

The Avi Vantage Platform scales load balancing resources dynamically by spinning up software load balancers where needed on demand. With continuous insights gathered by the Avi Controller, the system analyzes latencies and predictively autoscales load balancers as well as application servers (pool members) through native integration with the underlying orchestration platform. You can provision your applications and scale out elastically as traffic increases and then scale back down to normal levels.

TIP #2

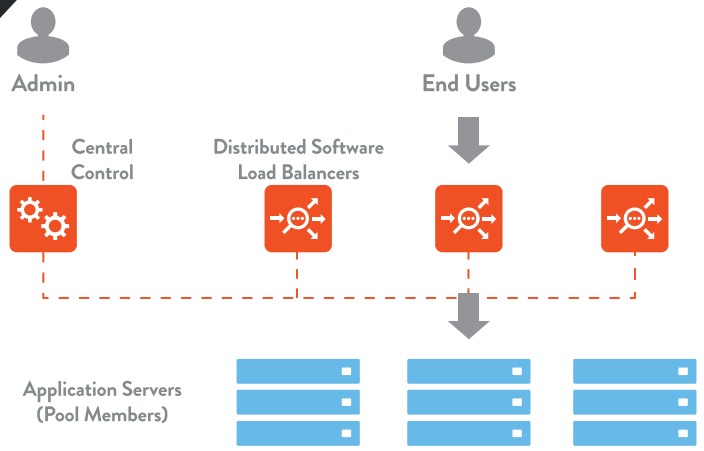
LOWER COSTS WITH HIGH-PERFORMANCE, SOFTWARE LOAD BALANCERS



Load balancers using proprietary hardware have long been the only choice for provisioning applications. The challenges with these appliances (or their virtual machine versions) are that they are expensive, lack multi-cloud support, and rely on manual configuration changes. They offer no easy means to troubleshoot applications and are not easy to procure and provision when you are scrambling to fix performance problems on your application or when you want to opportunistically use the public cloud. Software-defined load balancers such as the Avi Vantage Platform utilize the dramatic improvements in the computing power of standard Intel hardware enabling application throughputs of over 20 Gbps and over 72,000 SSL transactions per second on a single server. With a 1U, 2 socket server costing just a few thousand dollars, the cost/performance ratio has never been better. In addition, technologies like Intel's data plane development kit (DPDK) provide fast network packet processing. Avi Vantage also provides a consistent architecture for application services across data centers and multi-cloud environments.

TIP #3

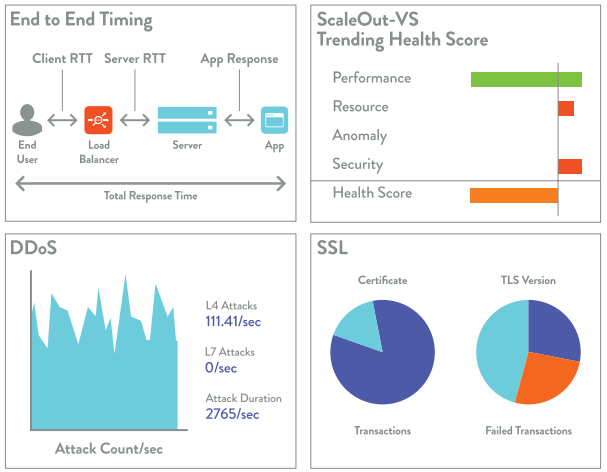
REDUCE OPERATIONAL ISSUES WITH CENTRAL MONITORING



Load balancers are a critical part of the application networking infrastructure. But architectural limitations of most Application Delivery Controllers (ADCs) do not enable administrators to manage services centrally and gain actionable insights into applications. The Avi Vantage Platform is architected on software-defined principles with a central controller that orchestrates a fabric of distributed load balancers that can run on bare metal servers, virtual machines, or containers. The Avi Controller receives continuous performance and security insights from the distributed load balancers and analyzes and displays them on an easy to use dashboard. You can monitor application performance at a glance and take corrective actions immediately.

TIP #4

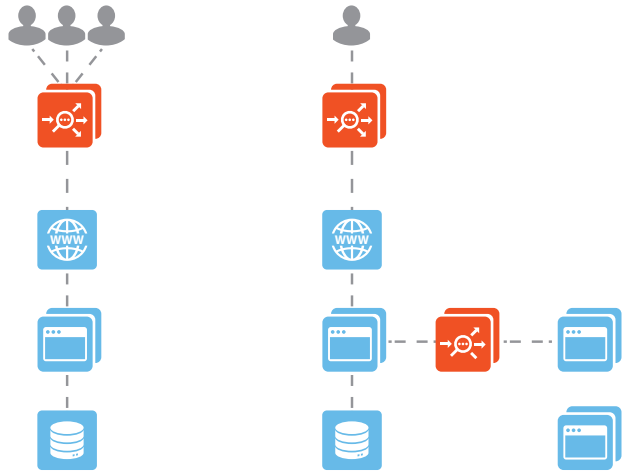
TROUBLESHOOT IN MINUTES WITH ANALYTICS AND "RECORD AND REPLAY"



Given that load balancers occupy a strategic location in the path of application traffic, they can be a good source of application intelligence. Legacy load balancers however do not provide application insights or meaningful end user information. The flexible architecture of the Avi Vantage Platform enables the collection of powerful analytics information about application performance including the precise roundtrip times for each network hop in individual transactions. The platform also includes security (SSL certificates used, potential DDoS attacks etc.) and end user (device, browser, location etc.) analytics for application transactions. All traffic events are recorded and can be played back for different time intervals (real time, last 15 minutes, last 6 hours, day, week etc.). The system also provides a quick way to search and filter for particular events using keywords such "iPhone" (to identify all end user events from iPhone users), "404" (to search for page not found errors) etc. If there is ever a need to troubleshoot application issues the system enables problem identification within a few minutes.

TIP #5

GAIN FLEXIBILITY WITH PER-APP LOAD BALANCING STRATEGIES



Legacy load balancing appliances are often deployed across multiple applications with system capacity shared across virtual services. Enterprises are forced into this model since it is cost prohibitive to place a load balancer in front of every application. In these cases, multitenancy is decided based on cost constraints as opposed to what is best for the backend application. With a software-defined architecture, Avi Vantage enables both multitenant deployments as well as per-app load balancing capabilities with the flexibility to deploy the right-sized load balancers for individual applications while still orchestrating and administering all of them centrally. This is especially useful when you are trying to isolate applications, adhere to SLAs, and scale services based on the needs of each application.

CONCLUSIONS

According to DynaTrace[2], 49% of shoppers would abandon a site if it took more than 3 seconds to load and 81% of millennials will abandon a buggy app and shop elsewhere. Load balancing and other L4–L7 application services are a critical component of the application infrastructure that need to be a part of your good housekeeping rules for preparing for the busiest shopping season of the year. Don't let legacy load balancing architectures slow you down or risk your application availability.

2 - Dynatrace survey. (2015, November 18).
Retrieved from https://www.dynatrace.com/content/dam/en/general/holiday-shopping-report.pdf

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ABOUT AVI NETWORKS

Avi Networks delivers public-cloud-like agility for application services beyond load balancing including deep application analytics, predictive autoscaling, and security in the data center or public cloud. The Avi Vantage Platform delivers elastic, software-defined application services on commodity x86 servers, VMs, or containers. Avi Vantage provides application services as a dynamic pool of resources that matches the automation needs of private or public cloud initiatives. Fortune 500 technology, media, and financial services companies use Avi Networks to accelerate application delivery, enable self-service for application owners, and lower their TCO.