

Avi Vantage Platform Accelerates Migration to Microsoft Azure

Multi-Cloud Application Services Platform with Elastic Load Balancing, Application Security, Visibility, and Analytics

CHALLENGES

- Migration to Microsoft Azure requires enterprise-grade application services beyond that of the Azure Load Balancer and Application Gateway
- Lift-and-shifting applications onto traditional appliance based solutions is not feasible, due to cost, elasticity and performance requirements
- Separate tools are required for load balancing, security, and analytics across data centers and public cloud

SOLUTION: AVI VANTAGE PLATFORM

- Software-defined load balancing with central management across multiple VNets
- Application visibility and insights to application performance and end user experience
- Consistent application delivery experience across Azure Cloud and data center
- 100% REST APIs for automation and integration for Azure VNets, scaleset, and Azure DNS

BENEFITS

- Easy migration of applications into the Azure cloud
- Improved operations with full automation, app analytics, and central management
- Simplified deployments with uniform hybrid-cloud architecture
- TCO savings of over 50% compared to legacy appliance-based solutions

GROWTH OF THE PUBLIC CLOUD

Enterprise interest in public cloud services like Microsoft Azure Public Cloud continues to grow. As of 2018, 20% of enterprises anticipate doubling their public cloud spending, and 71% will increase by at least 20%. In addition, 81% of enterprises have a multi-cloud strategy and operate five clouds on average¹. These multicloud environments require enterprise-grade application networking services and performance. Unfortunately, virtual load balancers inherit the architectural debt of the physical appliances and do not support cloud-native applications with agility and elasticity requirements. In fact, these lift-and-shift appliances do not work across multiple clouds, but require separate tools for data centers and public clouds.

ENTERPRISE-GRADE APPLICATION DELIVERY FOR MICROSOFT AZURE

The Avi Vantage Platform (see Figure 1), now known as VMware NSX® Advanced Load Balancer, is an elastic, cloud-native load balancing and *web application security* solution for Microsoft Azure with built-in application analytics. The platform's architecture separates the data plane (Avi Service Engines) and control plane (Avi Controller) to deliver application services that can be deployed across any cloud environment with central management. These application services include dynamic load balancing, real-time insights into application performance, security, end-user experience, predictive auto-scaling, and end-to-end automation for L4 – L7 services.

Figure 1: Avi Vantage Platform Integration with Microsoft Azure

¹"RightScale 2018 State of the Cloud Report." 15 Jan. 2018, <https://www.rightscale.com/lp/state-of-the-cloud>



Central Management

A single Avi Controller cluster manages load balancing for applications across multiple Microsoft Azure VNETs. An intuitive user interface with a single console administers all load balancers or Avi Intelligent Web Application Firewall (iWAF) instances across environments.



Per-Tenant / Per-App Deployments

Avi Vantage's centrally managed, distributed architecture allows enterprises to deploy granular per-tenant or per-app services. This enables natural isolation of services, eliminates over-provisioning, and reduces downtime due to upgrades or configuration changes.



Elasticity and Autoscaling

The analytics-driven, scale-out approach to elasticity allows the load balancers to automatically scale on demand, based on real time traffic patterns.



Automation Through REST APIs

All application networking services delivered by the Avi Vantage Platform are fully automatable with REST APIs. In addition, the Avi Networks GitHub repository contains ready-to-use Ansible modules and roles.



Multi-Cloud Deployments

For deploying applications across private data centers and Microsoft Azure, Avi Vantage offers consistent application services architecture with central management across all environments. In addition, the platforms supports global server load balancing and seamless cloud bursting to the public cloud based on real time traffic patterns.

APPLICATION INSIGHTS - TROUBLESHOOTING AND PERFORMANCE MONITORING

Avi Vantage is the only solution that includes built-in application analytics with enterprise-grade load balancing and application security. With millions of data points collected in real time, the platform delivers network-DVR like capabilities and application analytics to help troubleshoot applications. These application analytics (see Figure 2) are displayed over specific time intervals (last 15 minutes, hour, day, week etc.) or for individual transactions. Insights include total round trip time (RTT) for each transaction, application health scores, errors, end user statistics, and security insights (DDoS attacks, SSL vulnerabilities, CRS rules for OWASP TOP 10, ciphers etc.).

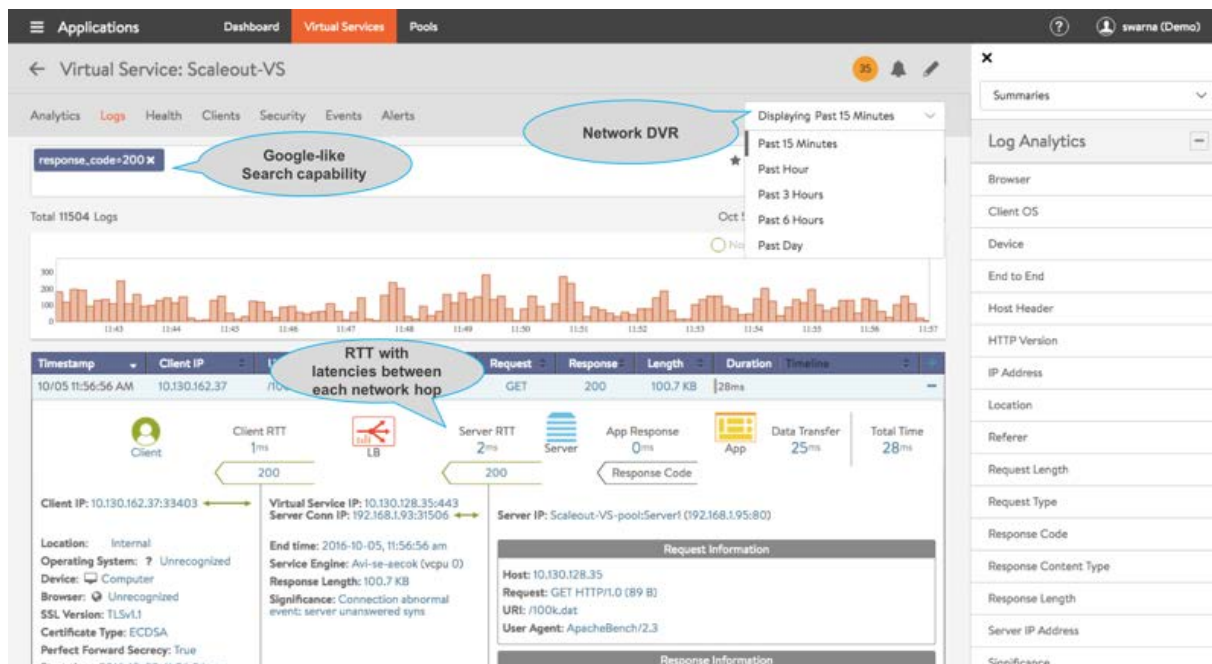


Figure 2. Avi App Insights

