Avi Networks and Cisco ACI Automate Application Services for $4 Billion Enterprise

LEADING FINANCIAL MANAGEMENT SOFTWARE FIRM AUTOMATES APPLICATION SERVICES WITH CISCO ACI AND AVI NETWORKS

A five-year-long quest for software-defined application delivery and services came to a fruitful end for this $4 billion enterprise when they chose Avi Networks and Cisco ACI as part of their move to a next generation data center architecture. Avi Networks represented the perfect complement to the network automation benefits delivered by Cisco ACI at the company.

THE CHALLENGE

Executives in the firm recognize the business-critical importance of great customer experience and drive it as a top-down mission for the organization. The company's flagship financial management solutions depend on IT's ability to deliver high performance for applications, turn around application changes quickly, and minimize outages. IT had chosen Cisco ACI as the software-defined networking solution to create a programmable infrastructure for internal teams. However, legacy appliance-based Application Delivery Controllers (ADC) that were in use did not address IT's requirements for automated application delivery and services. Service insertion and chaining were cumbersome and administrators were spending weeks solving versioning challenges with device packages. IT teams were stretched with troubleshooting application issues with no easy way to pinpoint performance problems or failures. Peak application usage scenarios drove the need to automate application services and dynamically match capacity to traffic patterns. Appliance-based ADC solutions (physical or virtual) were forcing the firm to overspend and preprovision additional hardware to account for unpredictable peak usage.

THE SOLUTION: CISCO ACI AND AVI NETWORKS

Minimal Configuration:

The firm picked the Avi Vantage Platform for its flexible integration with the Cisco ACI fabric and APIC controller and its software-defined architecture, which provided load balancing services as a pool of resources. Network engineers at the company describe Avi Vantage as "an elegant solution that automatically pulls the relevant information from APIC and minimizes configuration issues." The platform automatically adapts to changes in the applications or workload movements.

INDUSTRY
Financial Management Software

ENVIRONMENT
Cisco ACI

PROBLEM
- Cumbersome service insertion and chaining
- Weeks spent solving versioning challenges
- Lack of analytics to pinpoint performance problems and failures
- Costly overprovisioning for peak usage scenarios

WHY AVI
- Flexible integration with Cisco ACI fabric and APIC controller
- Fast service insertion without infrastructure and hardware dependencies
- Elastic autoscaling that matches real-time traffic
- Self-service for developers that provides application, security, and client insights

RESULTS
- Shortened time for service insertion and application provisioning from weeks to minutes
- Migrated workload between racks without impacting load balancing services
- Reduced troubleshooting to minutes
- Enabled independent service upgrades with Avi's multitenant features

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> **When we were looking for solutions that could mirror the level of automation we needed, we ran into Avi. All of our application delivery pain points were solved by Avi!**
>
> **SENIOR NETWORK ENGINEER**

Fastest Service Insertion for Cisco APIC:

Avi Vantage eliminated the need to create and deploy custom device packages for Cisco APIC, driving service insertion time down to minutes from weeks. The integrated Avi Vantage and Cisco ACI solution enabled the firm to remove infrastructure and hardware dependencies for application services.

Self-service for Developers:

Application owners no longer needed to "hurry up and wait" to deploy their applications by submitting IT tickets for virtual service provisioning. Platform capabilities made available through complete REST APIs enabled self-service provisioning for application developers who could take ownership for their apps. IT and application owners were able to eliminate a cumbersome assortment of third party tools while gaining unprecedented application, security, and client insights through the analytics capabilities in the Avi Vantage Platform (See Figure 1).
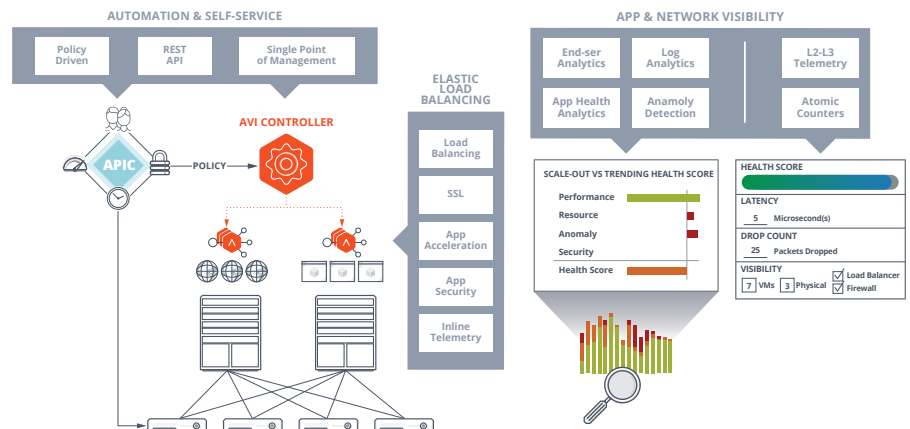

Figure 1: Avi Vantage Platform Features

THE RESULT

The combination of Avi Vantage and Cisco ACI delivered fully automated application services on top of a software-defined network.

- The firm reduced the time and effort required for service insertion and application provisioning from several weeks to just minutes.
- IT administrators were able to migrate workloads between racks without impacting load balancing services.
- Application analytics available through the platform have reduced troubleshooting time down to minutes
- Multitenancy and isolation enabled independent service upgrades for business units sharing the infrastructure.
- The IT function was transformed from simply providing a managed application delivery service to empowering self-service for application owners.

NEXT STEPS

The firm plans to extend its software-defined approach to application delivery with Avi Vantage distributed load balancers (Avi Service Engines) deployed per pod (group of 3-4 applications) or per application. This will deliver true multitenancy and enable individual business units to self-provision Avi Service Engines for faster application delivery.

> **Every time a business unit saw the Avi dashboard for client logs, metrics, and analytics, their eyes lit up. This was information we never had before!**