High Scalability and Availability through Load Balancer Automation

Client Overview

The customer is a global computer networking company powering highly secure and available digital experiences.

The Context

The customer is a leading provider of load balancing solutions that help meet the high availability, robust security, and enhanced user experience needs of end customers. However, the customer did not have any automation to create, configure, and manage their load balancers. Hence, they required an automation solution to enhance the capabilities of their load balancing solutions.

The Solution

With rich expertise in networking solutions, GS Lab | GAVS decided on an efficient and flexible architecture and zeroed in on OpenStack Octavia to provide the solution. OpenStack Octavia provides the ability to boot up the devices on the OpenStack platform and configure the load balancers on it. Other components on the devices can also be configured to enhance the capabilities of the customer's load balancing solutions. Network device APIs are used to configure components by giving custom parameters according to user needs. The solution also supports rack devices. Eight versions have been successively released with enhancements and new features. The solution delivered processing efficiencies, speed, high availability, and scalability of the load balancers, while also driving a boost in end customers.

Challenges

- No automation to create, configure, and manage load balancers
- Time consuming process of new load balancer creation which took up to 3 days
- Manual booting of load balancers when needed
- Manual intervention for any configuration changes required
- Absence of automatic scaling and high availability capabilities

Solution Highlights

- Efficient and flexible architecture
- Device bootup and load balancer configuration from OpenStack platform
- Configuration of other components with custom parameters
- Rack device support

Solution Outcomes

- Drastic reduction in load balancer boot time to 3 minutes
- High efficiency through seamless distribution of incoming traffic across backend server group
- Increased speed due to significantly reduced wait time and processing time
- High availability of the load balancers
- Easy horizontal scaling of servers
- Boost in customer's clientele due to this solution

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