Google Cloud Platform Support in Avi Vantage

Avi Technical Reference (v18.2)
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Avi Vantage supports integration with Google Cloud Platform (GCP). Avi Vantage offers elastic application services that extend beyond load balancing to deliver real-time application and security insights, simplify troubleshooting, auto scale predictively, and enable developer self-service and automation for applications hosted on Google Cloud Platform.

Features

Avi Vantage for GCP provides the following functionalities:

- Virtual Machines (VMs) are created using standard Google versions (For instance, CentOS 7.5). The CentOS image for the base VM is available in the Google repository.
- The Avi Controller and Avi Service Engines run as Docker containers.
- Service Engine uses a single interface for control and data traffic.
- Virtual IP (VIP) addresses are manually configured or allocated from an Avi-managed static pool.
- The service account authentication mechanism is used. Privilege is inherited on being spawned by an authenticated entity through API cells. The Controller instance should be spawned with a read-write scope, while Service Engines are spawned with a read-only scope.
- The only Controller interaction with the Google API is to add a ?route? to the VIP via the instance. The Controller uses query API calls as well. The Controller also interacts with the Google Cloud Platform to program the routes.
- For SE high availability, only elastic HA modes are supported for SEs.
- VMs are created with a single interface and are assigned an IP address with a /32 mask by GCE (Google Cloud Environment) from its internal subnet.
- The GCP Avi Controller instances need access to the GCP API endpoints. This can be achieved through any of the following mechanisms:
  - Controller instances having external IP addresses attached to them.
  - Controller instances connecting to a network, through a VPN, that has internet access.
  - The Controllers' subnet is enabled for Private Google Access.

Avi Vantage offers a flexible, yet comprehensive solution that is infrastructure-independent, agile, and elastic at a reduced total cost of ownership (TCO).

The following table provides a comprehensive list of links to documentation for Google Cloud Platform integration with Avi Vantage:
Deployment References

Avi Deployment Guide for Google Cloud Platform
Deploying Avi Vantage in GCP with Support for BYOIP
GCP Full Access Cloud Deployment Guide
Migrating to GCP Cloud
Roles and Permissions for GCP Full Access
Deploying Avi Vantage in GCP for Network Load Balancing

Configuration References

Server Autoscaling in Google Cloud Platform
IPAM Provider (Google Cloud Platform)
Example Configuration of Avi Controller and SE Instances on GCP
Route Aggregation for Google Cloud Platform
Configuring Instances with Multiple Interfaces
Role Setup for Installation in Google Cloud Platform
Configuring Firewall Rules in GCP
Cluster VIP in GCP
CMEK support for Encrypting SE Disks for GCP Cloud