vAPV Installation Guide for Google Cloud

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Revision History

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1 Introduction

Array vAPV is a virtual version of the Array APV Series application delivery controller that provides comprehensive layer 3-7 load balancing and traffic management, acceleration and Web application firewall with DDoS protection.

Google Cloud Platform, offered by Google, is a suite of cloud computing services that runs on the same infrastructure that Google uses internally for its end-user products. Alongside a set of management tools, it provides a series of modular cloud services including computing, data storage, data analytics and machine learning. Google Cloud provides Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Serverless Computing environments.

Array now provides support for deploying the vAPV as a VM (Virtual Machine) instance on the Google Cloud. Array vAPV is available as an instance image in the Google Cloud Marketplace. With this support, Google Cloud customers can leverage Array vAPV load balancing and other valuable features to better meet their business needs in the Google Cloud computing environment.

1.1 Supported Instance Types

Google Cloud machine type specifies a particular collection of virtualized hardware resources available to a virtual machine (VM) instance, including the system memory size, virtual CPU (vCPU) count, and maximum persistent disk capability. Array vAPV for Google Cloud currently supports the following instance types:

Table 1–1 Supported Instance Types

Instance Type	Purpose
Standard machine types: n1-standard-2 ~ n1-standard-96	Standard machine types are suitable for tasks that have a balance of CPU and memory needs. Standard machine types have 3.75 GB of system memory per vCPU.
High-memory machine types: n1-highmem-2 ~ n1-highmem-96	High-memory machine types are ideal for tasks that require more system memory relative to vCPUs. High-memory machine types have 6.50GB of system memory per vCPU.
High-CPU machine types: n1-highcpu-2 ~ n1-highcpu-96	High-CPU machine types are ideal for tasks that require more vCPUs relative to system memory. High-CPU machine types have 0.90 GB of system memory per vCPU.

For details of Google Cloud machine types, please refer to https://cloud.google.com/compute/docs/machine-types?hl=en_US&_ga=2.209194194.-1184565989.1533176266&_gac=1.53166426.1533779660.CjwKCAjwqarbBRBtEiwArlfEIFAMG2HoB-uOz4nfeeveO3C1RtGLKuMICM4_cveI2SSWJcCP7gjBwBoCGbcQAvD_BwE.

1.2 How Array vAPV Works on Google Cloud

The vAPV instance will be deployed as a VM in Google Virtual Private Cloud (VPC) networks, which are by default isolated private networking domains. Networks have a global scope and

contain regional subnets. VM instances within a VPC network can communicate among themselves via internal IP addresses as long as firewall rules permit. However, no internal IP address communication is allowed between networks, unless you set up mechanisms such as VPC peering or VPN.

In Google Cloud Platform, each VM instance can have one primary internal IP address, one or more secondary IP addresses (optional), and one external IP address (optional). To communicate between instances on the same VPC network, you can use an instance's internal IP addresses. To communicate with the Internet, you must use the instance's external IP address unless you have configured a proxy of some kind. Both external and internal primary IP addresses can be either ephemeral or static.

In deployment, Array vAPV and real services are launched as VM instances within the Google Cloud VPC, as shown in the following figure.

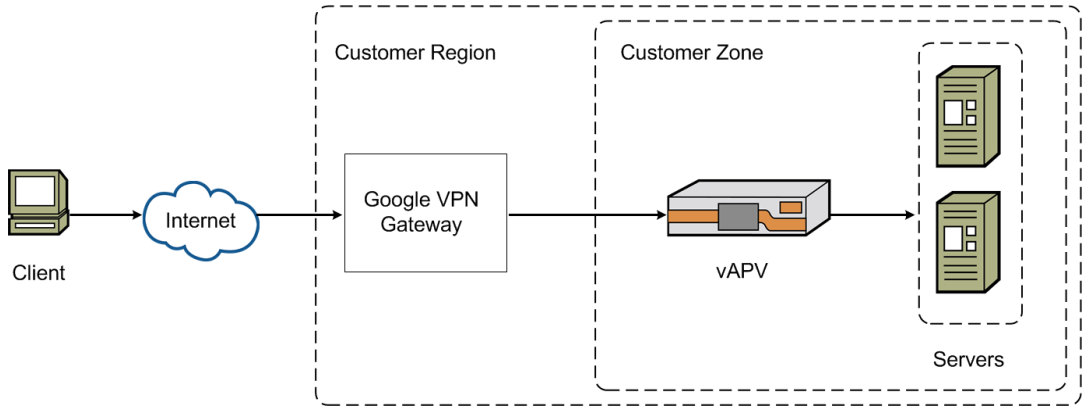


Figure 1–1 Google Cloud VPC with vAPV Deployed

1.3 Usage Guidelines

The following information of vAPV deployed on Google Cloud should be noticed:

- In the Google Cloud architecture, the vAPV instance is provided only one default network interface. But you can create multiple network interfaces attached to the vAPV instance to enable communication between different VPC networks.
- vAPV for Google Cloud supports the following features:
  - Server Load Balancing (SLB) (Layer 3-7)
  - SSL Acceleration (software SSL only)
  - HTTP Proxy (content rewrite, compression, cache, etc.)
  - Application Security
- vAPV for Google Cloud supports only the BYOL (Bring Your Own License) license model. Please refer to the section 2.3 Loading the vAPV License for how to load the vAPV license.

2 Deployment

This section describes the deployment process of the vAPV instance on Google Cloud.

2.1 Deploying the vAPV Instance on Google Cloud

To deploy the vAPV instance on Google Cloud, please perform the following steps:

1. Log into Google Cloud (https://cloud.google.com) with a valid account. Click **Marketplace** in the navigation bar and then click **EXPLORE MARKETPLACE**, as shown in the following figure.

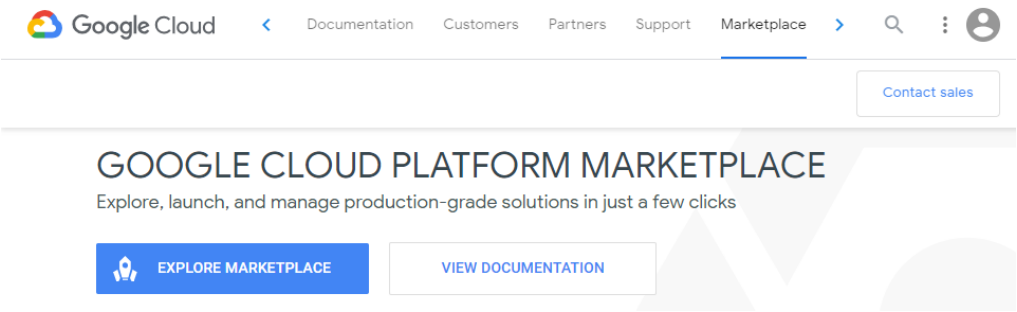


Figure 2–1 Enter the Marketplace

2. Enter "**Array Networks vAPV**" in the search box and press "Enter", as shown in the following figure.

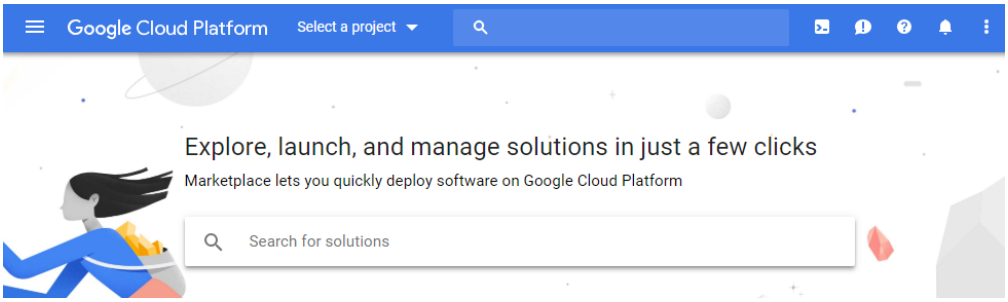


Figure 2–2 Search for the vAPV image

3. Click **LAUNCH ON COMPUTE ENGINE** to deploy vAPV image as shown in the following figure.

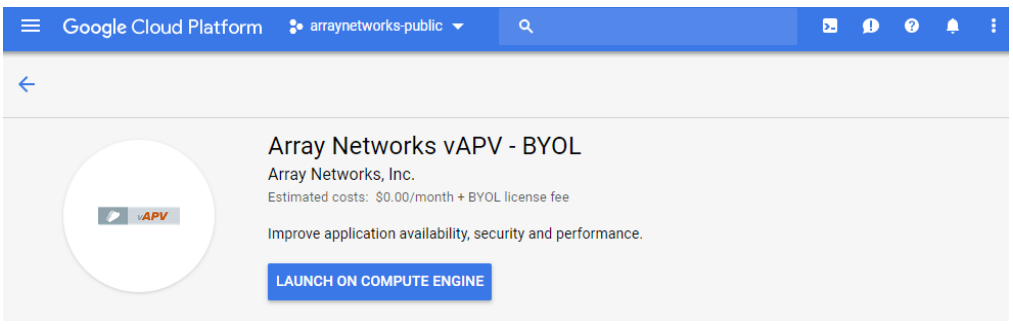
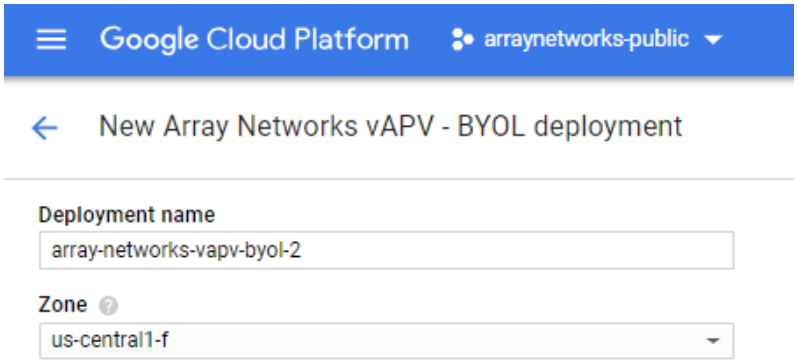


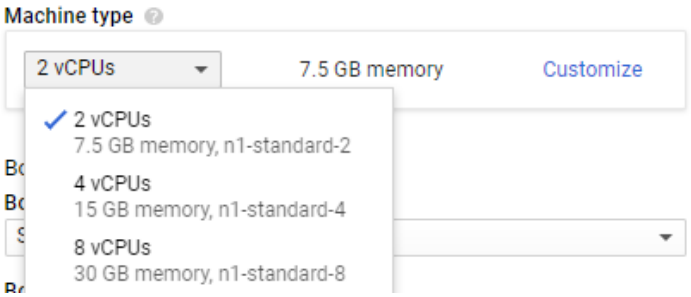
Figure 2–3 Create a Virtual Machine

4. In the vAPV deployment page, specify the following parameters as required:

   a. Configure deployment name and select deployment zone.

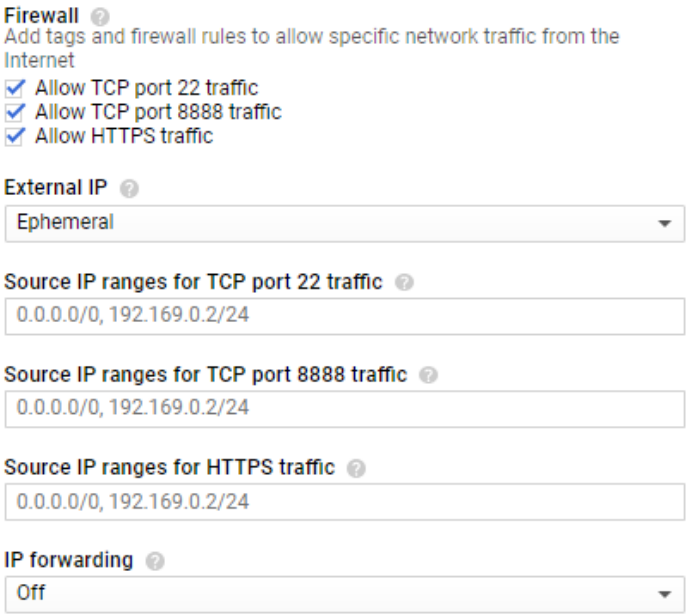


   b. Select a machine type as required.



   c. Choose boot disk type and size as required.

   d. Configure networking parameters including firewall, external IP and IP forwarding.



5. After configuring all the above parameters, click the **Deploy** button to finish. The deployed vAPV instance can be viewed through the Deployment Manager panel.

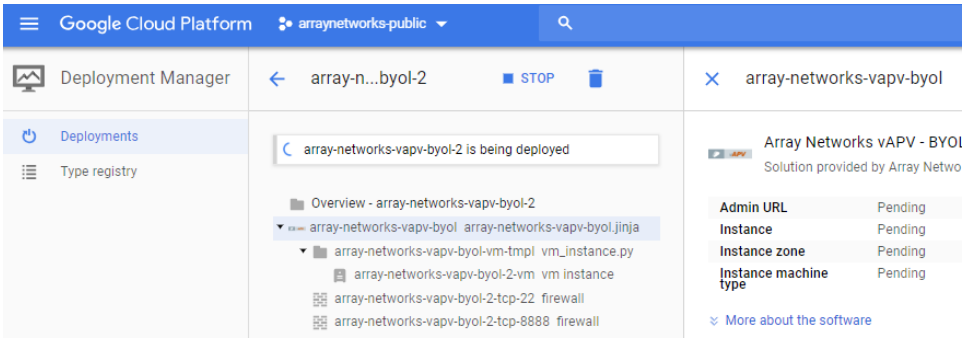


Figure 2–4 View the vAPV Status

2.2 Accessing the vAPV Instance

2.2.1 Accessing the vAPV Instance via SSH

You can connect to the vAPV instance via SSH after the status of the newly created vAPV instance becomes “Running”.

To access the vAPV instance via SSH, use its external IP address and SSH port 22 as the SSH access point. The username is “array”, and the password is “admin”.

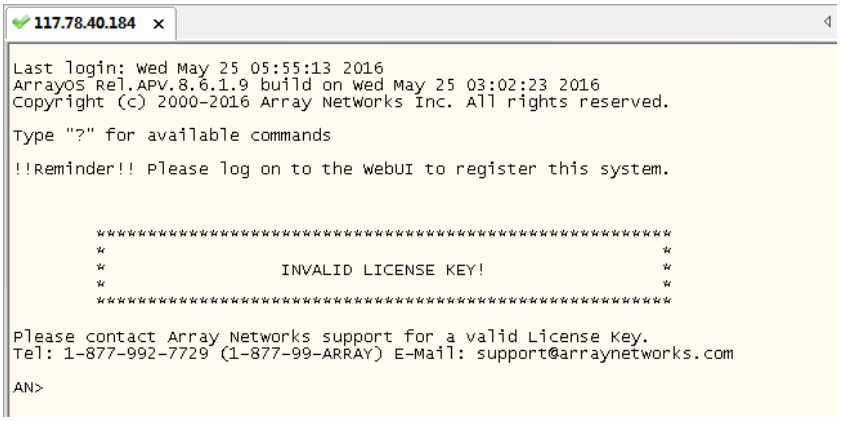


Figure 2–5 Access the vAPV Instance via SSH

2.2.2 Accessing the vAPV Instance via WebUI

To access the vAPV via WebUI, you first need to access the vAPV instance via SSH to make the following configurations:

- Change the password of the default account (array) using the “passwd user array new_password” command.
- Enable the new WebUI using the “**webui on**” command. For legacy WebUI, please use “**webui legacy on**” command.
- (Optional) Configure the new WebUI port using the “**webui port**” command. For legacy WebUI, please use “webui legacy port <port>” command.

After the preceding configurations are completed, you can access the WebUI of the vAPV instance at https://<External_IP>:<WebUI_port> using a Web browser. On the login page, enter “array” as the username and the previously configured “new_password” as the password to pass the authentication.

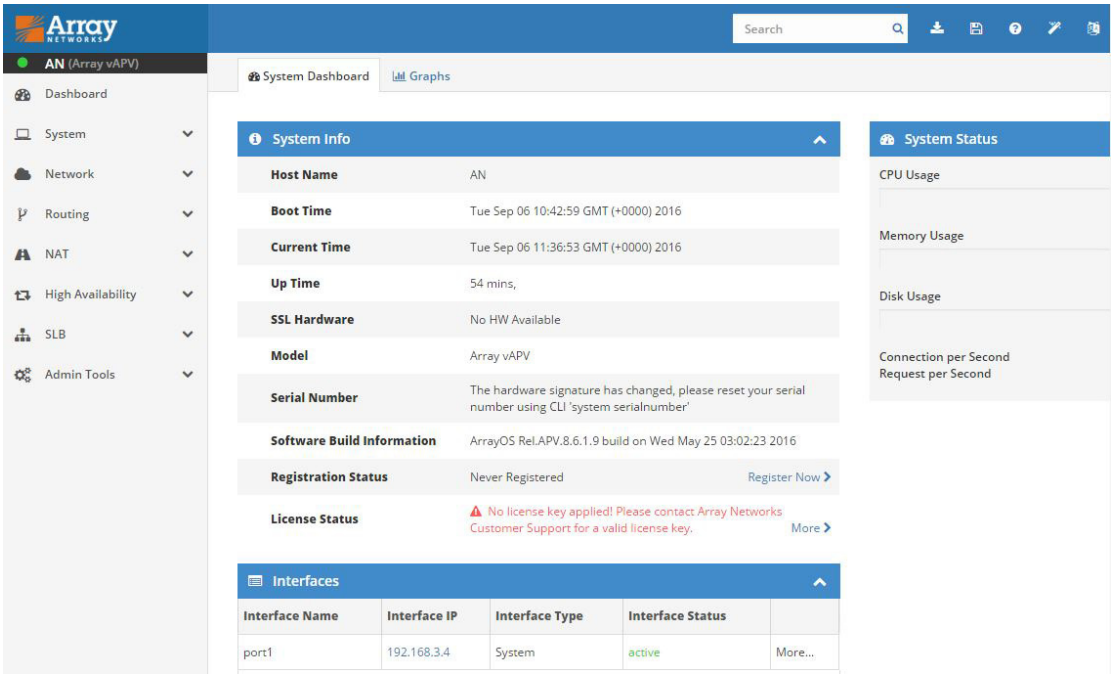


Figure 2–6 Access the vAPV Instance via WebUI

2.3 Loading the vAPV License

In order to load the license you need to purchase a vAPV license directly from Array Networks or an authorized reseller. Then perform the following steps to load the vAPV license:

1. Access the vAPV instance via SSH.
2. Manually generate the serial number for the vAPV by executing the "**system serialnumber**" command.
3. View the software version, model and serial number of the vAPV by executing the "**show version**" command.
4. Contact Array Networks Customer Support to obtain a valid license key.
5. Execute the "**system license**" command in the Config mode, paste the license key and press "Enter". Then the license will be successfully loaded. For further information on configuring and running the vAPV, please refer to APV User Guide and CLI Handbook.