vAPV Installation Guide
for Huawei Cloud

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Revision History

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October 10, 2016	Initial official version.

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1 Introduction

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

Array now provides support for deploying the vAPV as ECS (virtual machine) on the Huawei Cloud computing platform. Array vAPV image is available in the Huawei Marketplace. With this support, Huawei Cloud customers can leverage Array vAPV load balancing and other valuable features to better meet their business needs in the Huawei Cloud-computing environment.

1.1 How Array vAPV Works on Huawei Cloud

Huawei Cloud provides various services like Virtual Private Cloud (VPC), Elastic Cloud Server (ECS), Elastic Volume Service (EVS) and so on.

Huawei Cloud VPC provisions a logically isolated, configurable, and manageable virtual network where you can create multiple subnets to define the services like VPN, ECS and so on. Huawei Cloud VPC simplifies the network management process, and also provides access rules to enhance the security for the services deployed within the virtual network.

Huawei Cloud ECS is a computing server that consists of CPUs, memory, images, and disks and that allows on-demand allocation and elastic scaling. An ECS integrates VPC, virtual firewalls, and multi-data-copy capabilities to build up an efficient, reliable, and secure computing environment.

An EIP is a static, public IP address, which enables the communication between the VPC and the Internet. During the deployment of vAPV ECS, you should bind the vAPV ECS to an EIP.

In deployment, Array vAPV and real services are launched as ECS within the Huawei Cloud VPC, as shown in the following figure.
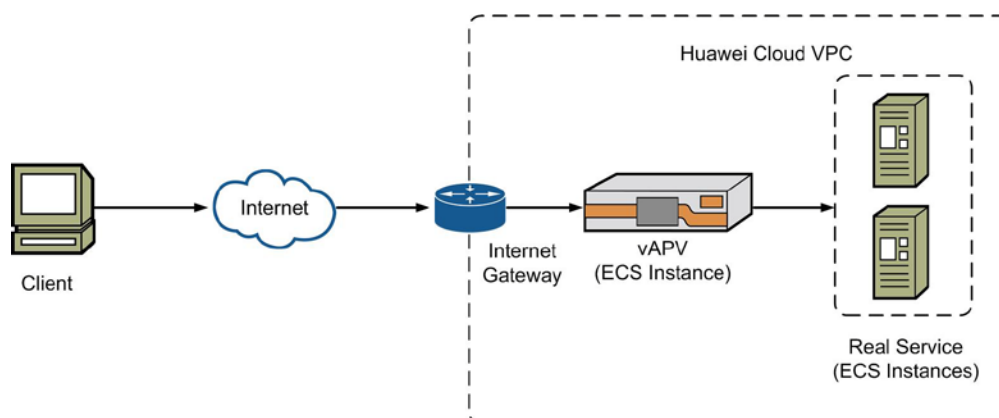
Figure 1–1 Huawei Cloud Service with vAPV Deployed

1.2 Supported ECS Types

Huawei Cloud supports multiple ECS types, which are different in disk sizes, processing speed and other capacities. Array vAPV for Huawei Cloud currently supports the following ECS types:

Table 1–1 ECS Types Supported by vAPV

ECS Type	Type Specification	Purpose
General-purpose	c1.large~c1.8xlarge c2.large~c2.8xlarge s1.large~s1.8xlarge	Provides general computing, storage, and network configurations for the majority of application scenarios, such as web servers, enterprise R&D and testing, and small-scale databases.
Memory-optimized	m1.large~m1.4xlarge	Provides a high memory-to-vCPU ratio, used when applications require large memory and process large volumes of data, such as relational databases and NoSQL.

1.3 Usage Limitations and Guidelines

Currently, vAPV for Huawei Cloud has the following limitations:

- In the Huawei Cloud service architecture, the vAPV ECS is provided only one interface. The vAPV ECS can have two IP addresses: one EIP (public IP address) and one private IP address. On the vAPV ECS, all the VIPs must use the EIP to communicate with the internet.

- vAPV for Huawei Cloud supports the following features:

    - Server Load Balancing (SLB) (Layer 3-7)

    - SSL Acceleration (software SSL only)

    - HTTP Proxy (content rewrite, compression, cache and so on.)

    - Application Security

- vAPV for Huawei Cloud supports only the BYOL (Bring Your Own License) license mode. Please refer to the section 2.5 Loading the vAPV License for how to load the vAPV license.

2 Deployment

This section describes the deployment process of the vAPV ECS on Huawei Cloud.

2.1 Creating Huawei Cloud VPC and Security Group

Before the deployment of vAPV ECS on Huawei Cloud, please finish the configuration of VPC and subnet first.

➢ **Creating a VPC**

Before deploying the vAPV ECS, you need to use Huawei Cloud VPC to create a private isolated network on Huawei Cloud. The deployment of the vAPV on Huawei Cloud is similar to that in a physical network infrastructure. For more information about creating and configuring the VPC, please refer to http://support.hwclouds.com/en-us/usermanual-vpc/en-us_topic_0013935842.html

➢ **(Optional) Creating Subnets for the VPC**

Once a VPC is created, a subnet is automatically created by default. If required, you can create multiple subnets in the VPC. For more information about creating subnets, please refer to http://support.hwclouds.com/en-us/usermanual-vpc/en-us_topic_0030971615.html

➢ **Creating a Security Group**

A security group is a collection of access control rules for ECSs that have the same security protection requirements and are mutually trusted in a VPC. You can create a security group and add ECSs in the VPC to the security group to improve ECS access security. After a security group is created, it has a default rule. The default security group rule allows all outgoing data packets. ECSs in a security group can access each other without the need to add rules. For more information about creating a security group, please refer to http://support.hwclouds.com/en-us/usermanual-vpc/en-us_topic_0030971657.html

2.2 Deploying the vAPV ECS on Huawei Cloud

To deploy a vAPV ECS on Huawei Cloud, please perform the following steps:

1. Log into Huawei Cloud (http://www.hwclouds.com/en-us/) with a valid account. In the home page, select **Management Console > Elastic Cloud Server > Buy ECS** to enter the ECS purchase page.

2. Select the region (CN Northeast or CN East) wherein the VPC is created.
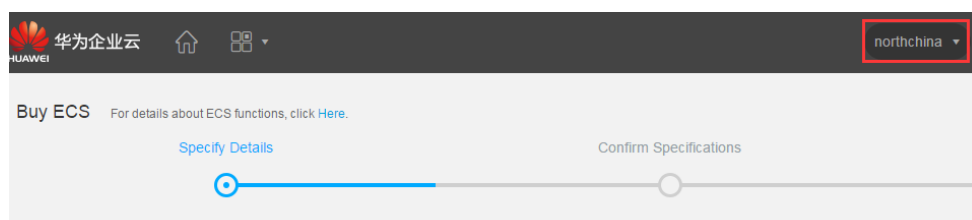
Figure 2–1 Select the Region

3. Select the fee calculating type. If you choose **Metered**, the fee will be charged on the actual usage.

Figure 2–2 Select the Fee Calculating Type

4. Configure the **Basic Information**.

In the **Available Zone (AZ)** option, please select the zone (Zone1 or Zone2) wherein your VPC is created. And select the other parameters as required.
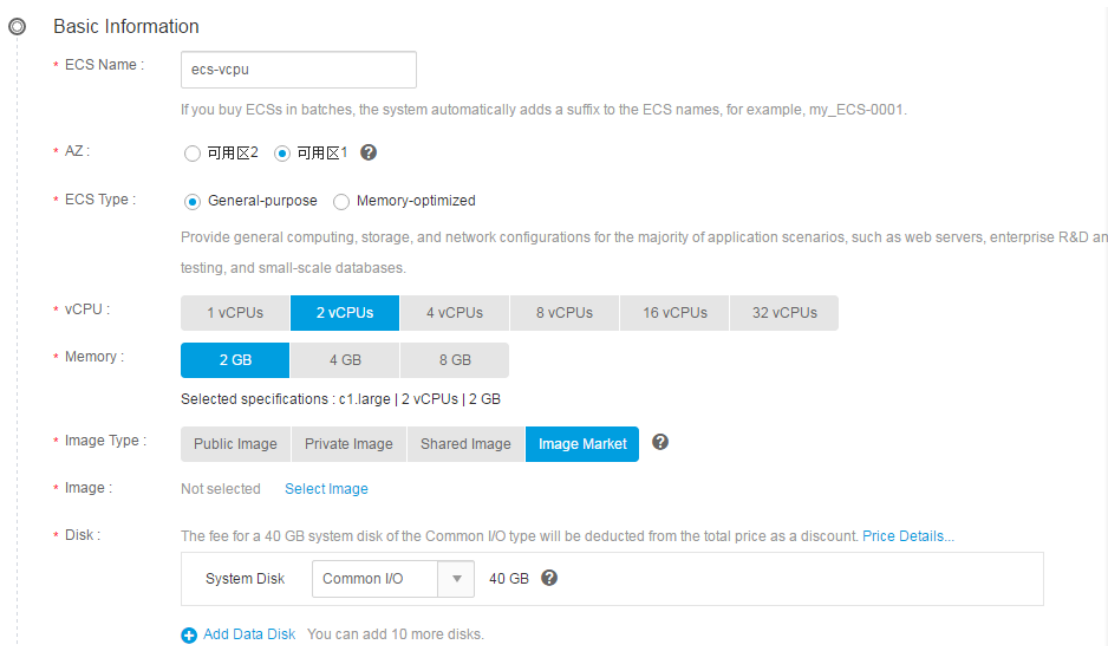

Figure 2–3 Configure the Basic Information of the vAPV ECS

In the **Image Type** option, please select **Image market**, and then click **Select Image** in the **Image** options. In the pop-up window, choose the Array vAPV image in **Network And Security** category and click **OK**.

Figure 2–4 Choose the vAPV Image

5. Configure the **Network**.

   In the **Elastic IP Address** option, you should assign an EIP to the vAPV ECS to enable the communication with the Internet. And select the other parameters as required.
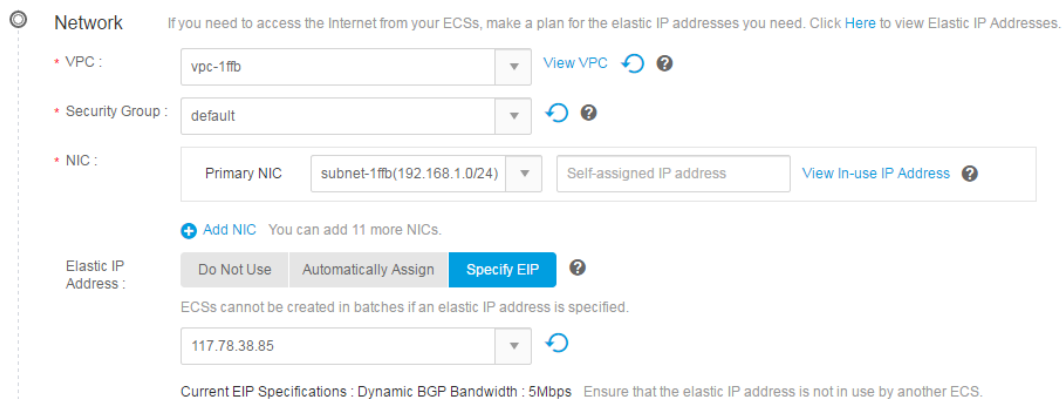

Figure 2–5 Configure Network Information of the vAPV ECS
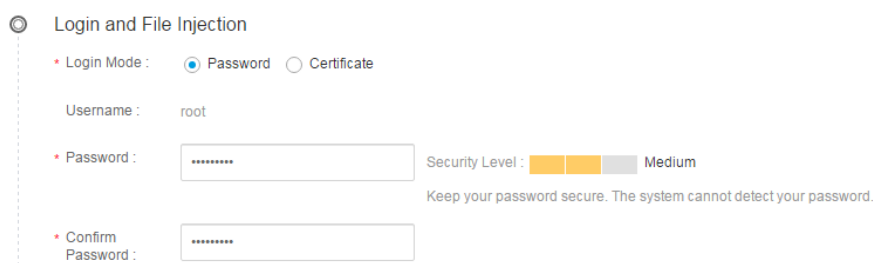
6. Configure the **Login and File Injection**.

Figure 2–6 Configure Password for the vAPV ECS

Note: Huawei Cloud does not support specifying the login username, and the login password configured here is used only for the creation of the ECS. For more details about the login information, please refer to 2.4 Accessing the vAPV ECS.

7. Click **Buy Now**, and then click **Submit Application** to confirm the purchase.

Figure 2–7 Purchase the vAPV ECS

8. Check the status of the newly created vAPV ECS in the **Elastic Cloud Server** page.

	Name	Status	Specifications	Image	Private IP Addr...	Elastic IP Addr...	AZ	Operation
> ☐	ecs-vapv	🟢 Running	CPU : 2 vCPUs Memory : 2 GB	Array vAPV	192.168.3.4	117.78.40.184	可用区1	Remote Login More ▾

Figure 2–8 Status of the Newly Created vAPV ECS

2.3 Binding an EIP to the vAPV ECS

If you do not have enough EIP resources during the deployment of vAPV ECS, you can deploy the vAPV without assigning an EIP at first, and then apply for a new EIP and bind it to the vAPV. The procedure is as follows:

1. Log in to the **Management Console**.

2. On the console homepage, under **Network**, click **Virtual Private Cloud**.

3. On the **EIP** page, click **Apply for EIP**.

4. On the **Apply for EIP** page, set parameters as prompted.

5. Click **Buy Now**.

6. Confirm the order, and read and agree to the service agreement. Then, click **Submit Order**. If you specify the bandwidth size when assigning an EIP, you also need to pay for the bandwidth.

7. On the **EIP** page, locate the row that contains the target elastic IP address, and click **Bind**.

8. On the **Bind IP Address** page, select the required ECS and NIC.

9. Click **OK**.

2.4 Accessing the vAPV ECS

2.4.1 Accessing the vAPV ECS via SSH

You can connect to the vAPV ECS via SSH after the status of the newly created vAPV ECS becomes "Running".

To access the vAPV ECS via SSH, use its Elastic IP address and SSH port 22 as the SSH access point. The username is "array", and the password is "admin".

Figure 2–9 Access the vAPV ECS via SSH

2.4.2 Accessing the vAPV ECS via WebUI

To access the vAPV via WebUI, you first need to access the vAPV ECS 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 ECS at https://<EIP>:<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.
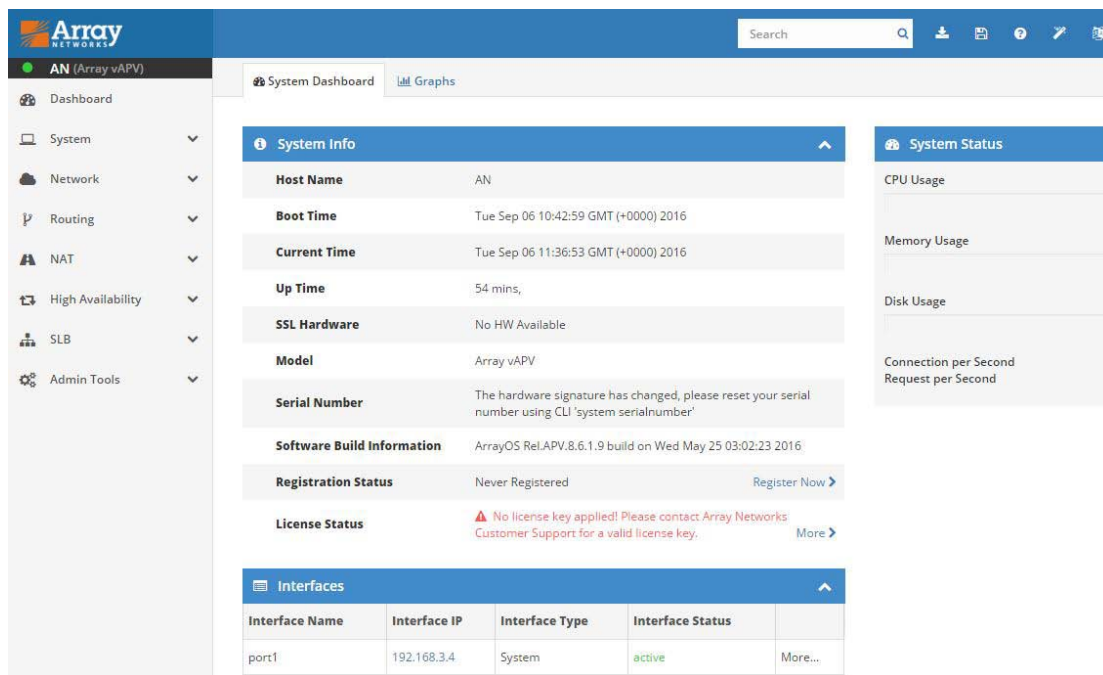
Figure 2–10 Access the vAPV ECS via WebUI

2.5 Loading the vAPV License

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

1. Access the vAPV ECS via SSH.

2. View the software version, model and serial number of the vAPV by executing the "**show version**" command.

3. Contact Array Networks Customer Support to obtain a valid license key.

4. Execute the "**system license**" command in the Config mode, paste the license key and press "Enter". Then the license will be successfully loaded.