

Deploying the vAPV Virtual Machine on KVM

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The first steps in deploying the vAPV virtual machine on KVM are to download the compressed file containing the bootable hard disk of the VM and the XML formatted configuration file. Next you must create a VM by using these files. Detailed steps are as follows:

1. Please contact our Array Networks support team (support@arraynetworks.net) for download instructions.
2. Download the compressed file containing the disk0.raw file and the XML configuration file. Please make sure that you have more than 40GB of free space after the download.
3. Extract the compressed file by using the "`tar xvzf <vAPV_image>.tar.gz`" command.
4. This creates a folder which contains the disk0.raw file and the XML configuration file.
5. Place the XML configuration file in the "`/etc/libvirt/qemu/`" folder.
6. Edit the configuration file to specify the appropriate bridge name that you want the interfaces to be connected to. Please do not change any other fields as it might lead to licensing conflicts.
7. Open the virtual management interface by issuing "`virsh -c qemu:///system`". Note that the following two steps are performed under the virtual management interface.
8. Define a VM from the XML configuration file by issuing "`define /etc/libvirt/qemu/vAPV.xml`".
9. Start the VM by issuing "`start vAPV`".

2 Post-Installation Configuration

1. Please finalize all VM configurations before requesting a new license.
Caution: Any VM configuration change may invalidate current license.
2. Please contact the Array Networks sales or support team to obtain a license key (E-Mail: support@arraynetworks.net).

3 Array vAPV Series Installation Guide

Once the virtual machine starts, the login shell will appear on the console tab of the vAPV virtual machine, for example, on the Citrix XenCenter, the VMware vSphere™ client or the OpenXen client. Please note that it may take a couple of minutes for the login shell to appear.

The initial username/password is array/admin.

4 Minimum Initial Configuration

Three ways are available to connect the vAPV to begin configuration:

1. Console (recommended)
2. SSH
3. Web browser

To set up the vAPV via SSH or a Web browser, first you need to complete the network setting of the vAPV through the Console connection.

It is recommended to access the vAPV system via the Console. Since the vAPV does not support serial console, you need to use the virtual machine console tab on the XenCenter, the vSphere Client or the Virtual Machine Manager. The vAPV will prompt you for a User Privilege Password. The prompt like "Array Networks Login (AN):" may appear. If this is the first time you connect the vAPV, or if you have not changed the default password, then enter the user name "array" and the password "admin".

Now enter "**enable**" and press "**Enter**" to switch to the enable mode. You will be prompted to enter an enable password. The default enable password is null. Therefore, just press "**Enter**". The prompt like "AN#" will appear.

Now enter "**config terminal**" and press "**Enter**" to switch to the configuration mode. The prompt like "AN(config)#" will appear. At this point, the administrator will have full access to the vAPV CLI.

The CLI commands required for minimum configuration are listed below. It is recommended that you set port1 and port2, the default route, and WebUI IP address and port.

ip address {system_ifname/mnet_ifname/vlan_ifname/bond_ifname} <ip_address> {netmask/prefix}

Allows the user to set each interface IP address and netmask or prefix length.

ip route default <gateway_ip>

Allows the user to set the default gateway IP address.

webui ip <ip_address>

Allows the user to set the IP address that the vAPV will accept Web User Interface commands via the Web browser. It is recommended that a management IP address be used for configuring the WebUI IP address.

webui port <port>

Allows the user to set the port from which the vAPV will accept WebUI commands. The port must be designated within the range from 1024 to 65000. The default port is 8888.

webui {on|off}

Enables or disables the WebUI.

With the above network setting completed for the vAPV, you may set up the vAPV via SSH or a Web browser. You may use a Web browser to connect to the WebUI IP address assigned to the vAPV (with WebUI enabled) or establish an SSH connection to the IP address of the vAPV.

Note: if you change the setting of the vAPV's port1 IP address or WebUI IP address, the connection to the vAPV will terminate and you will have to reconnect the vAPV with the new network addresses.

Configuration Sample

```
AN(config)#ip address port1 172.16.85.192 255.255.255.0
```

```
AN(config)#ip address port2 192.168.10.1 255.255.255.0
```

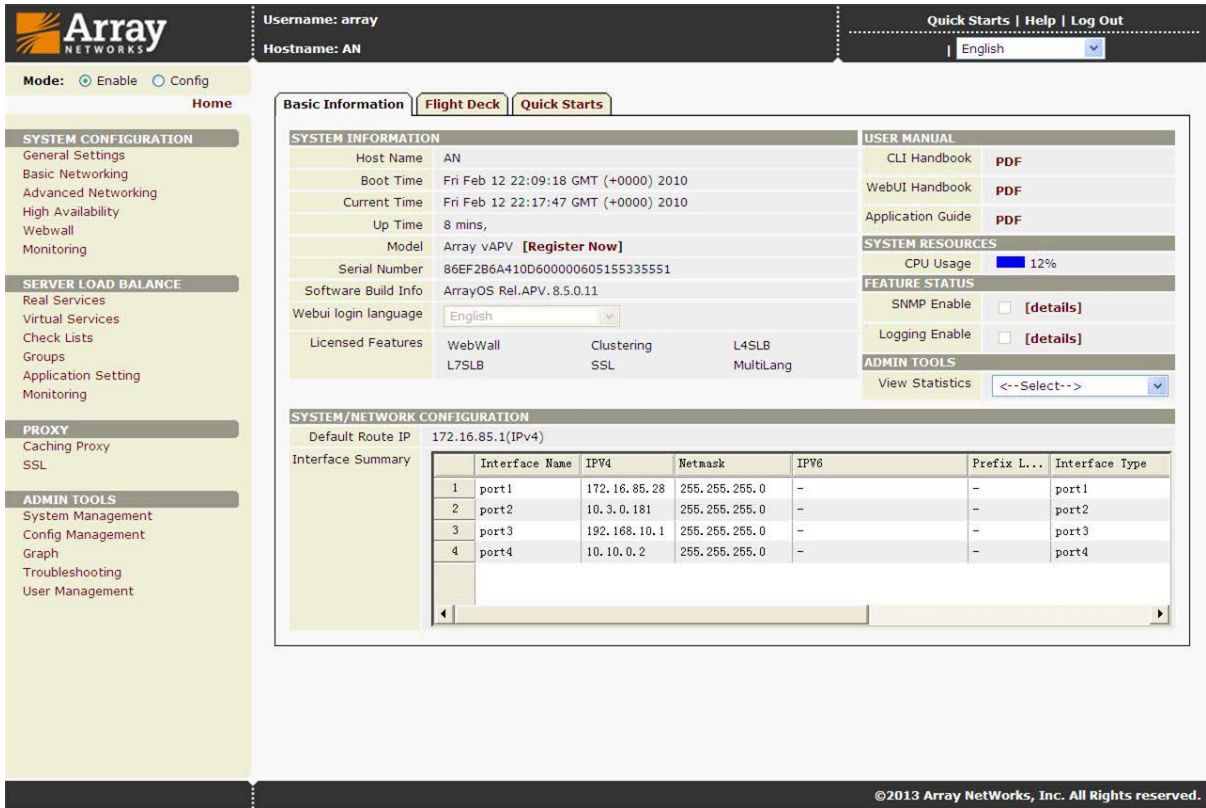
```
AN(config)#ip route default 10.10.0.1
```

```
AN(config)#webui ip 172.16.85.192
```

```
AN(config)#webui port 8888
```

```
AN(config)#webui on
```

After completing these steps, administrators may continue to configure the vAPV via the CLI or WebUI. To access and configure vAPV via WebUI, enter the URL **https://172.16.85.192:8888** in the address bar of a browser. Then follow the prompts to log in the vAPV and enter the password for the "enable" mode. After you entered the "enable" mode, the following window will be displayed.



The screenshot displays the Array Networks web management interface. At the top, the user is logged in as 'array' on host 'AN'. The interface is divided into several sections:

- Mode:** Enable (selected) / Config
- Navigation:** Home, Basic Information, Flight Deck, Quick Starts
- Left Sidebar:**
 - SYSTEM CONFIGURATION:** General Settings, Basic Networking, Advanced Networking, High Availability, Webwall, Monitoring
 - SERVER LOAD BALANCE:** Real Services, Virtual Services, Check Lists, Groups, Application Setting, Monitoring
 - PROXY:** Caching Proxy, SSL
 - ADMIN TOOLS:** System Management, Config Management, Graph, Troubleshooting, User Management
- Main Content Area:**
 - SYSTEM INFORMATION:** Host Name (AN), Boot Time (Fri Feb 12 22:09:18 GMT (+0000) 2010), Current Time (Fri Feb 12 22:17:47 GMT (+0000) 2010), Up Time (8 mins), Model (Array vAPV [Register Now]), Serial Number (86EF2B6A410D60000605155335551), Software Build Info (ArrayOS Rel.APV. 8.5.0.11), Webui login language (English), Licensed Features (WebWall, Clustering, L4SLB, L7SLB, SSL, MultiLang).
 - USER MANUAL:** CLI Handbook (PDF), WebUI Handbook (PDF), Application Guide (PDF).
 - SYSTEM RESOURCES:** CPU Usage (12%).
 - FEATURE STATUS:** SNMP Enable, Logging Enable (both with [details] links).
 - ADMIN TOOLS:** View Statistics (dropdown menu).
 - SYSTEM/NETWORK CONFIGURATION:** Default Route IP (172.16.85.1(IPv4)).
 - Interface Summary Table:**

	Interface Name	IPv4	Netmask	IPv6	Prefix L...	Interface Type
1	port1	172.16.85.28	255.255.255.0	-	-	port1
2	port2	10.3.0.181	255.255.255.0	-	-	port2
3	port3	192.168.10.1	255.255.255.0	-	-	port3
4	port4	10.10.0.2	255.255.255.0	-	-	port4

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For more detailed configuration information, please refer to the User Guide and CLI Handbook of the APV series products.