

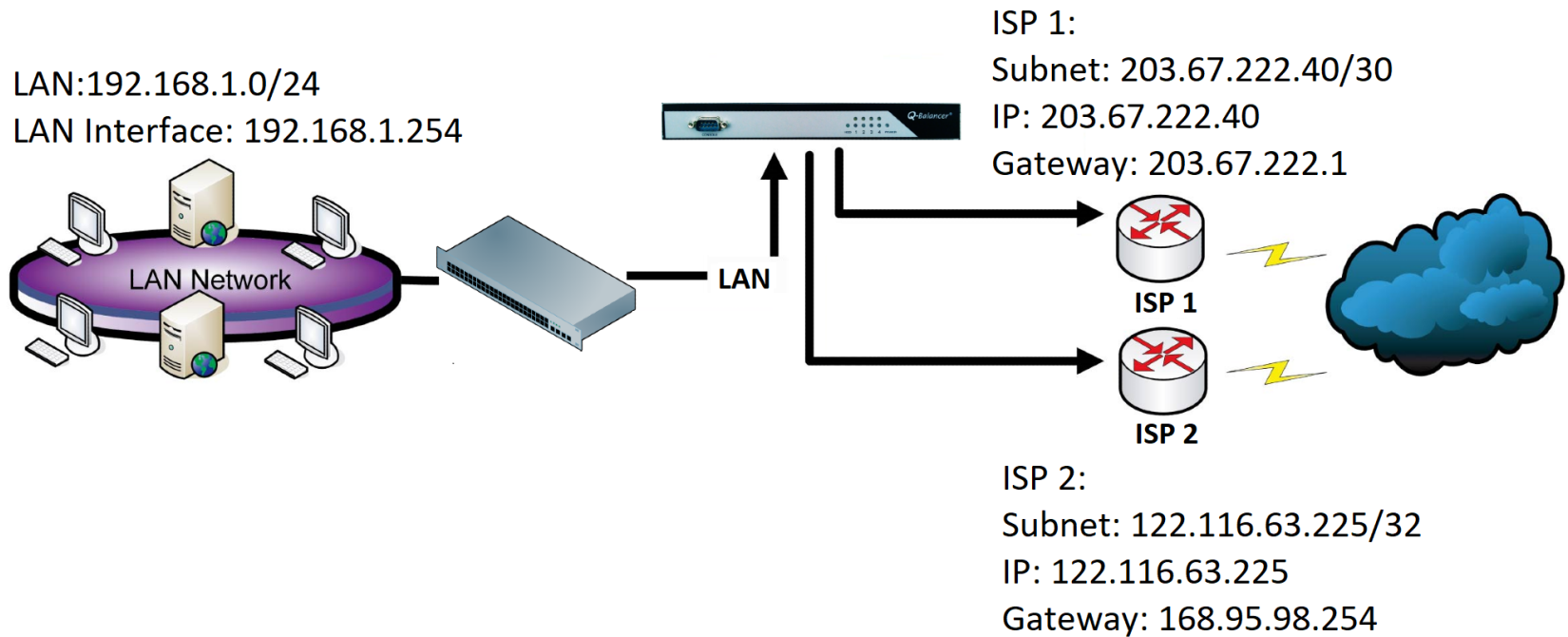


How To Guide: *VRRP High Availability*

Introduction

This article outlines general procedures for configuring VRRP High Availability.

Diagram Example



For your reference, the following are the existing network setting in the boot configuration file on the primary Q-Balancer appliance:

WAN configuration is done as follows:

WAN

ADD

DELETE

Enabled	Status	Type	↑↓	Name	↑↓	Port	↑↓	Interface	↑↓	Subnet	↑↓	IP	↑↓	Gateway	↑↓
<input checked="" type="checkbox"/>	✓	Static		SPARQ		Port 1		eth0_1		203.67.222.40/30		203.67.222.40		203.67.222.1	
<input checked="" type="checkbox"/>	✓	PPPoE		HiNet		Port 2		ppp1		122.116.63.225/32		122.116.63.225		168.95.98.254	

LAN configuration is done as follows:

LAN

ADD

DELETE

Enabled	Name ↑↓	Port ↑↓	Interface ↑↓	Subnet ↑↓	Route ↑↓	IP ↑↓	DHCP ↑↓
<input checked="" type="checkbox"/>	LAN_192.1	Port 4	eth3_5	192.168.1.0/24	Interface	192.168.1.254	✓

Objects > DPS

The **DPS** is configured as follows:

Dynamic Path Selection

ADD

DELETE

Name**Backup Pool****Algorithm****Information**

WRR_Hinet_SPARQ

-

WRRC

SPARQ

1

HiNet

3

Policy Routing

The **Policy Routing** is configured as follows:

Policy Routing

[ADD](#)[DELETE](#)

Enabled	Priority	Source	Destination	Services	Schedules	Pool
<input checked="" type="checkbox"/>	7	LAN_192.168.1.0/24	Any	Any	Always	WRR_Hinet_SPARQ

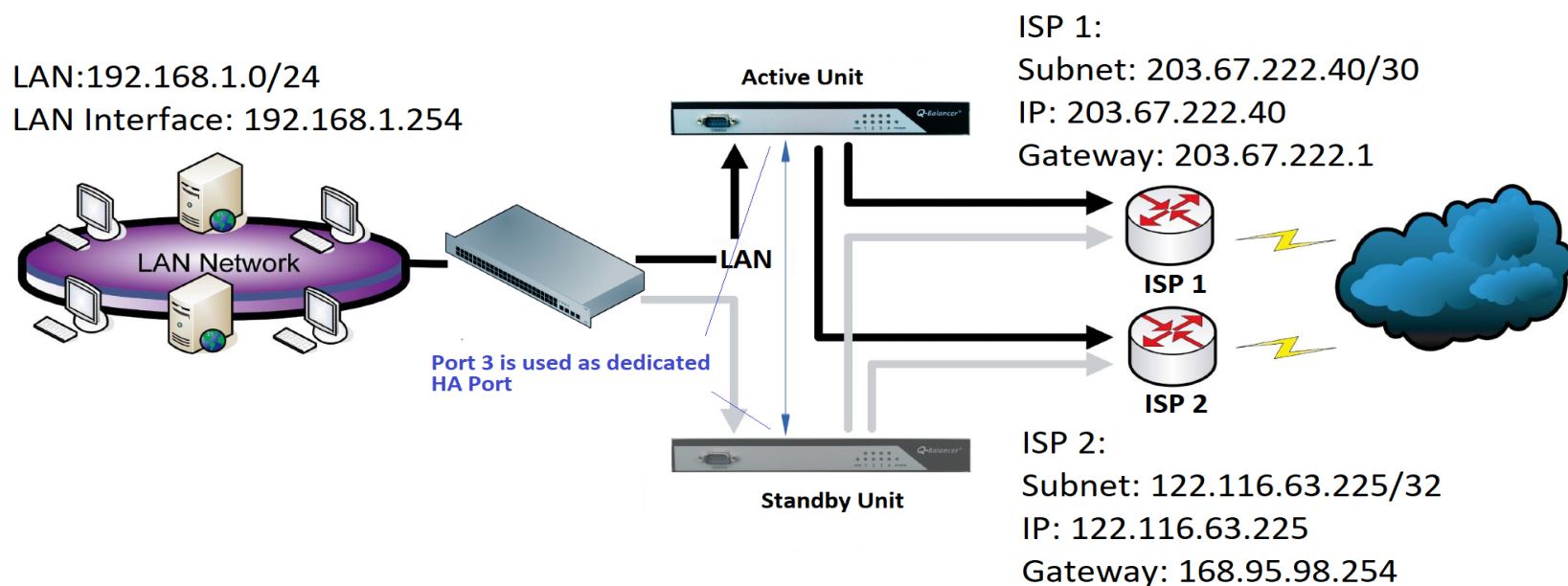
Requirement

To prevent single point of failure caused by the Q-Balancer appliance itself, now the network configuration is requested to:

1. Protect network continuity from unplanned outages by human error, software problems, hardware failures, and environmental issues.
2. Reduce the impact whenever systems offline is needed for necessary maintenance tasks.

Solution: VRRP High Availability

The following is a HA network diagram to be proposed:



In Q-Balancer HA, there are Primary and Secondary appliances. To configure HA, you can either start with Primary or Secondary appliance. Based on the existing configuration, follow the steps below to configure the Secondary appliance:

1. *Create a configuration file for **standby***
2. *Complete the **HA** setting*
3. Apply the **Active** Configuration to the **Secondary** appliance

Create a configuration file for standby

In this case, we will just create configuration files by loading **default** configuration and saving it as **standby**

Configuration

Boot

Default

20181009

20181223

Configuration

standby

Boot

20181009

Complete the HA setting

HA

Status: Standby

Enabled

Role

Primary Secondary

Auto Firmware Sync

Auto Config Sync

Active Configuration

Boot ▼

Standby Configuration ▼

standby

Monitoring

Interval

3 ▼ Secs

Failover Times

3 ▼

Local Standby IP

21.21.21.21

Port (HA port is dedicated.)

Port 3 ▼

Remote Standby IP

12.12.12.12

OK

Apply the Active Configuration to the Secondary appliance

Apply the configuration by clicking the icon  .

As shown previously, **WAN/LAN/DPS/Policy Routing** have been configured on the Primary appliance, and therefore we will only need to complete the **HA** configuration as follows:

1. *Create a configuration file for **standby***
2. *Complete the **HA** setting*
3. *Manually Synchronize **Active Configuration** to the **Secondary** appliance by deliberately saving it again.*

Create a configuration file for standby

we will just create configuration files by loading **default** configuration and saving it as **standby**

Configuration

Boot

Default

20181009

20181223

Configuration

standby

Boot

20181009

Complete the HA setting

HA

Status: Active

Enabled

Role

Primary Secondary

Auto Firmware Sync

Auto Config Sync

Active Configuration

Boot ▼

Standby Configuration

standby ▼

Monitoring

Interval

3 ▼ Secs

Failover Times

3 ▼

Local Standby IP

12.12.12.12

Port (HA port is dedicated.)

Port 3 ▼

Remote Standby IP

21.21.21.21

OK

Synchronize Active Configuration from Primary to the Secondary appliance

The screenshot illustrates the configuration synchronization process. On the left, a sidebar menu contains options: Logout, Load, Save, Delete, Backup, and Upload. The 'Save' option is circled in orange, with an orange arrow pointing to the 'Configuration' section. In the 'Configuration' section, there are two radio buttons: '20190624' (unselected) and 'Boot' (selected). The 'Boot' option is circled in orange. Below the 'Boot' option is a blue 'SAVE' button, also circled in orange. An orange arrow points from the 'SAVE' button to a blue refresh icon on the right. To the right of the refresh icon, the text 'Apply the configuration.' is displayed.

Note: To get HA setting take effect, you may optionally reboot the **Primary** and **Secondary** appliances and ignore this step.

Done!

Power off the **Primary** appliance and check if LAN hosts can access the Internet.

```
C:\WINDOWS\system32\cmd.exe

C:\Users\installation>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=24ms TTL=56
Reply from 8.8.8.8: bytes=32 time=23ms TTL=56
Reply from 8.8.8.8: bytes=32 time=23ms TTL=56
Reply from 8.8.8.8: bytes=32 time=23ms TTL=56

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 23ms, Maximum = 24ms, Average = 23ms

C:\Users\installation>
```