



# Application Guide

Hongdian- Load Balance



## Contents

<b>Contents</b> .....	<b>2</b>
<b>Revision History</b> .....	<b>2</b>
<b>1 Overview</b> .....	<b>3</b>
<b>2 Description</b> .....	<b>3</b>

## Revision History

Document update notes are described below:

Doc Version	Product	Release Data	Details
V1.0	Hongdian Router	2017.08.25	First Release

# 1 Overview

"Load Balance" function can be useful in applications with redundant communications links. Using load balancing, both links (including WAN, modem, modem2, and etc.) of the router can be in use all the time. The use of multiple links simultaneously increases the available bandwidth.

This article introduces the load balance configuration of Hongdian Router with dual modem. After configured, the two modem network links are used alternately.


# 2 Description

1. Setup two modem, make them both connect to internet well. Make sure both SIM card can access to internet, as show below.


Network Applications VPN Forward Security System **Status**

Basic System Information LAN WAN **Modem** Routing Table Help

**modem**

Modem Select	0
Up Time	807 seconds
Modem Status	connected
Network Type	LTE
Signal	 (31 )
IP Address	10.21.117.7
DNS	210.21.196.6
SIM Status	ready
SIM ICCID	89860116851049409285
SIM IMSI	460019253723670
LAC	0
CELL ID	0

**modem2**

Modem Select	2
Up Time	790 seconds
Modem Status	connected
Network Type	ltd-lte
Signal	 (30 )
IP Address	10.231.41.43
DNS	210.21.196.6
SIM Status	ready
SIM ICCID	89860116851016886137
SIM IMSI	460019262754118
LAC	9537
CELL ID	62475
RSRP	-80 dBm
SINR	219

Refresh

**Display:**  
This page displays cellular modem status.

2. Setup both modem and modem2 MASQ as show below:

**MASQ**

Interface	Operation
modem	Delete
modem2	Delete

**SNAT**

Protocol	Original Address	Original Port	Mapping Address	Mapping Port	Operation
----------	------------------	---------------	-----------------	--------------	-----------

**DNAT**

Protocol	Original Address	Original Port	Mapping Address	Mapping Port	Operation
----------	------------------	---------------	-----------------	--------------	-----------

Add Refresh

3. Enable Load Balance and setup the static route as show below:

Load Balance  Enable  Disable

Route Type	Network	Gateway	Priority	Operation
Static Route	0.0.0.0/0	modem		Delete
Static Route	0.0.0.0/0	modem2		Delete

Add Refresh

4. Connect two PCs to router LAN interface.

5. Check the policy route in routing table as below:

Network	Subnet Mask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	0.0.0.0	modem	1
192.168.8.0	255.255.255.0	0.0.0.0	br0	0
192.168.10.0	255.255.255.0	0.0.0.0	eth0	0
192.168.251.41	255.255.255.255	0.0.0.0	modem	0
192.168.251.180	255.255.255.255	0.0.0.0	modem2	0

**Static Route**

Network	Subnet Mask	Gateway	Interface	Priority
1.1.1.1	255.255.255.255	0.0.0.0	modem	1
192.168.8.252	255.255.255.255	0.0.0.0	modem	1
2.2.2.2	255.255.255.255	0.0.0.0	modem2	2
192.168.8.6	255.255.255.255	0.0.0.0	modem2	2

**Policy Route**

Refresh

You can see the two IP address of PCs goes through different interface(one is via modem and the other is via modem2) to internet.

## 6. Test connection

Try to access internet from both PC. Works well.

## 7. Confirm PC1 and PC2 goes though different modem interface.

Method:

You can search your gateway Internet IP with Google, or visit the URL <http://whatismyipaddress.com/> and etc, for checking the IP address. The two PC will have different IP show on the website for they are using different modem.

Google search results for "where is my IP". The search results show "About 20,300,000 results (0.58 seconds)". The main result displays the public IP address "47.88.138.251" and the text "Your public IP address". Below the IP address is a link: "→ Find out more about IP addresses". A "Feedback" link is visible at the bottom right of the search results box.



*Create smart things*



## **Contact us**

---

 F14 - F16, Tower A, Building 14, No.12, Ganli 6th Road, Longgang District, Shenzhen 518112, China.

 +86-755-88864288-5

 +86-755-83404677

 hongdianchina

 [www.hongdian.com](http://www.hongdian.com)

 [sales@hongdian.com](mailto:sales@hongdian.com)

 Hongdian\_China