

## How to setup the Multi-nets NAT feature on TP-LINK router

Sometimes we may need to divide an internal network into several subnets that can share the same gateway router for Internet connection. However, by default settings, TP-LINK router abandons packets from IP addresses in different subnets from its LAN. So in order to achieve this, the gateway router is required to be able to translate (NAT) and deliver packets from LAN, which have IP addresses in different subnets. Multi-nets NAT is the feature on TP-LINK router that makes this possible.

### 1. Scenario

A company has three departments in a building, Marketing, Finance and Personnel. The requirements are as followings:

- 1) Each department is assigned to an individual subnet.
- 2) All the departments should be able to communicate with each other through the router.
- 3) All the departments access Internet via the same gateway router.

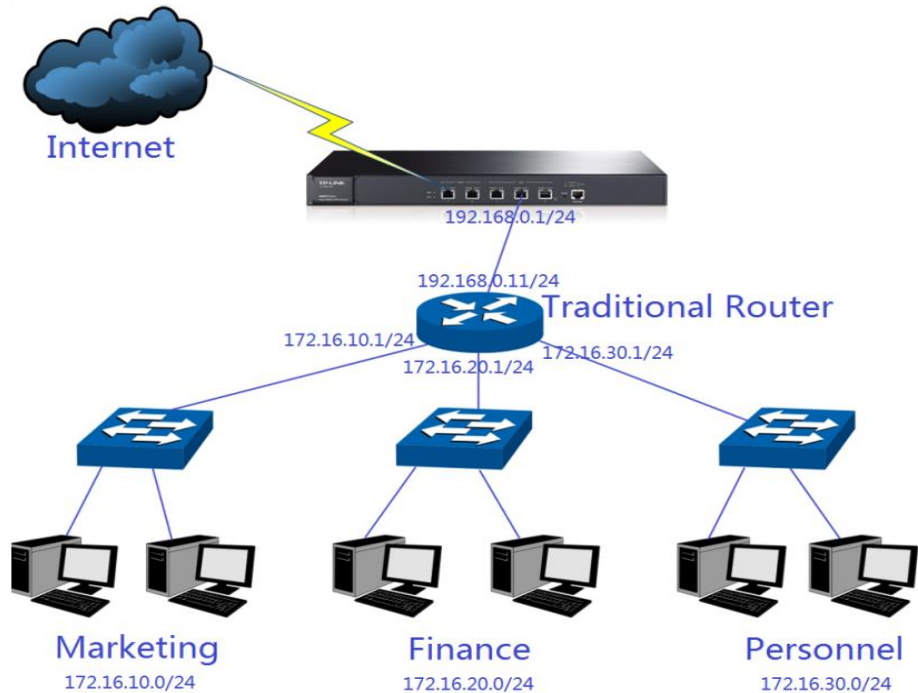
### 2. Network planning and topology

- 1) Network address of each department:

Department	Network address
Marketing	172.16.10.0/24
Finance	172.16.20.0/24
Personnel	172.16.30.0/24

- 2) Topology:

In this scenario, TL-ER6120 acts as the gateway router and TP-LINK L3 switch, T3700G-28TQ does the job of a traditional router.



### 3. Configurations on the gateway router

#### Step 1

Add a Multi-nets NAT entry for Marketing, Finance and Personnel respectively:

The screenshot shows the TP-LINK web interface for the TL-ER6120 router. The 'Multi-Nets NAT' configuration page is active. The configuration fields are as follows:

- Subnet/Mask: 172.16.10.0 / 24
- Interface: LAN
- Description: Marketing (Optional)
- Status:  Activate  Inactivate

Buttons for 'Save', 'Clear', and 'Help' are visible. Below the configuration fields is a 'List of Rules' table:

No.	Network Address	Interface	Description	Status	Action
1	172.16.10.0/24	LAN	Marketing	Active	
2	172.16.20.0/24	LAN	Finance	Active	
3	172.16.30.0/24	LAN	Personnel	Active	










Buttons for 'Select All', 'Activate', 'Inactivate', 'Delete', and 'Search' are located below the table. A note at the bottom states: 'Note: Multi-Nets NAT takes effect only when it cooperates with the Static Route entries.'

#### Step 2

Add a Static Route entry respectively for Marketing, Finance and Personnel: Static route is necessary in order for the gateway router TL-ER6120 to know where to deliver the packets to IP addresses in different subnets (172.16.10.0/24,

172.16.20.0/24 and 172.16.30.0/24).

The screenshot shows the TP-LINK TL-ER6120 web interface. The browser address bar shows '192.168.1.1/userRpm/Index.htm'. The page title is 'TP-LINK TL-ER6120'. The navigation menu on the left includes: Network, User Group, Advanced (NAT, Traffic Control, Session Limit, Load Balance, Routing), Firewall, VPN, Services, Maintenance, and Logout. The main content area is titled 'Static Route' and has tabs for 'Static Route', 'RIP', and 'Route Table'. The 'Static Route' tab is active, showing configuration fields: Destination (172.16.10.0), Subnet Mask (255.255.255.0), Next Hop (192.168.0.11), Interface (LAN), Metric (0), and Description (Marketing). There are 'Save', 'Clear', and 'Help' buttons. Below the configuration fields is a 'List of Rules' table with columns: No., Destination, Subnet Mask, Next Hop, Interface, Metric, Status, Description, and Action. The table contains three rows of rules. Below the table are buttons for 'Select All', 'Activate', 'Inactivate', 'Delete', and 'Search'.

No.	Destination	Subnet Mask	Next Hop	Interface	Metric	Status	Description	Action
1	172.16.10.0	255.255.255.0	192.168.0.11	LAN	0	Active	Marketing	  
2	172.16.20.0	255.255.255.0	192.168.0.11	LAN	0	Active	Finance	  
3	172.16.30.0	255.255.255.0	192.168.0.11	WAN1	0	Active	Personnel	  

With the topology and all the settings above, the three departments in different subnets can communicate with each other through the traditional router and access the Internet via the gateway router TL-ER6120 as well.