

Port Forwarding

For some purpose, we need to deploy some services with a single public IP address while each of the services is hosted by on or more hosts. The following figure shows a typical application scenario of this purpose.

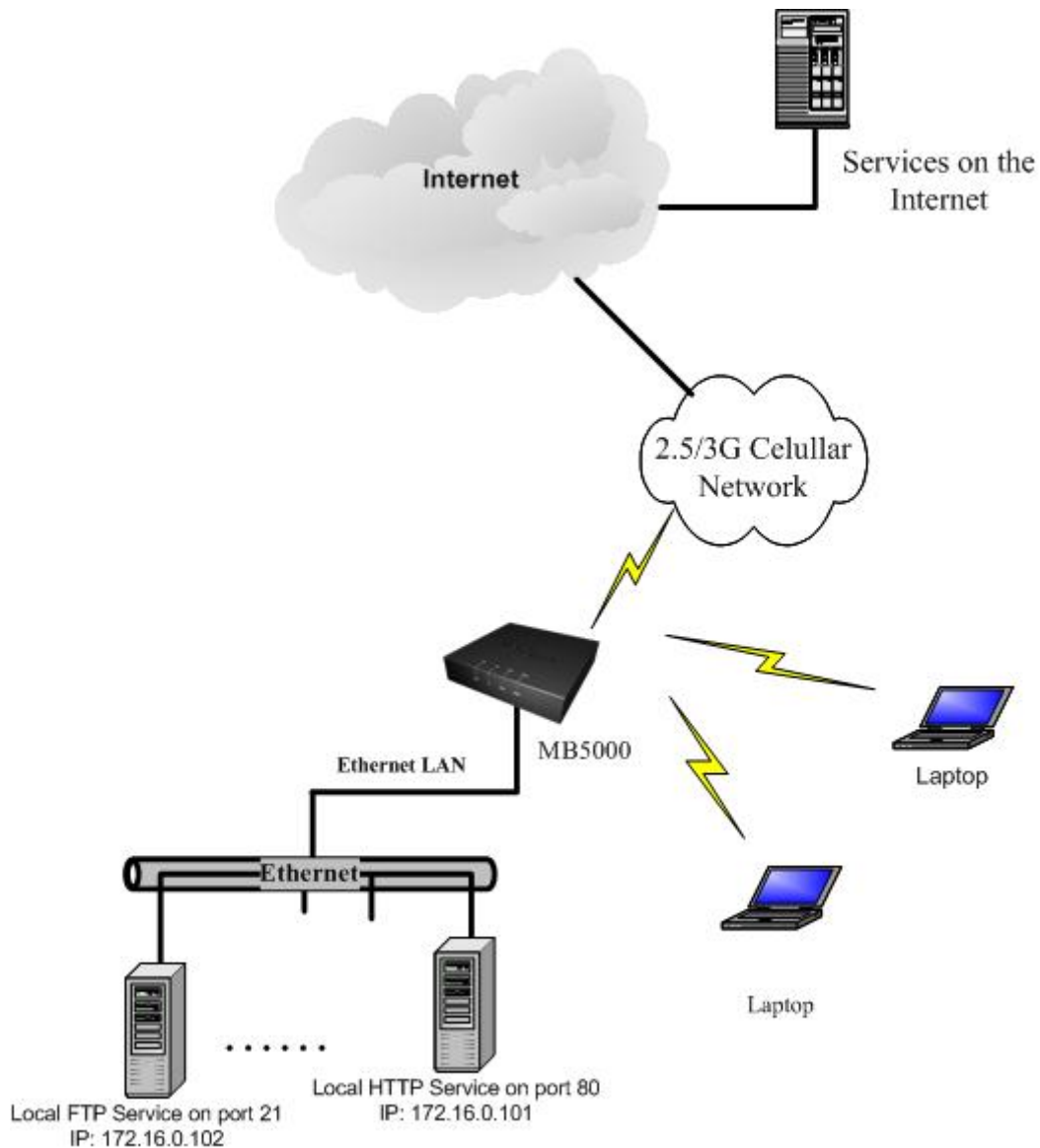


Figure 1. Network scenario for Port Forwarding.

Here we show a sample configuration on MB5000. We assigned a private IP address of 172.16.0.101 to the HTTP server, while 172.16.0.102 to the FTP server. By default, the HTTP standard uses a TCP port of 80 while the FTP uses TCP 21 port.

What we need is to make the MB5000 to forward all of the certain packets to the desired hosts. We need to set aside global TCP ports for these two services. For example, we assign TCP

port 8080 for the HTTP service on 172.16.0.101, and 8021 for FTP service. Thus the incoming packets from the WAN interface will be forwarded to the desired hosts according to the protocol and the port number. When MB5000 receives a packet from its WAN interface, it will look up the port forwarding table to decide whether this packet should be forwarded and which host/port pair it should be forwarded to.

The table below shows a sample assignment for the network above. The next step is to configure the MB5000 according to the assignment.

Internal Service Port	Internal IP address	External Port	Protocol Type
80	172. 16. 0. 101	8080	TCP
21	172. 16. 0. 102	8021	TCP

Figure 2. IP and port assignment for Port Forwarding.

How to configure Port Forwarding on MB5000

Login to MB5000's webGUI and go to the **"Firewall"** -> **"Port Forwarding"** page to configure Port Forwarding on MB5000.

1. Click the **"Add"** button to add a new Port Forwarding rule.

Firewall: Port Forwarding



Figure 3. Port Forwarding page.


2. Fill in the corresponding parameters in the popup window and then click **"Submit"** to submit to MB5000. Note that the **"Submit"** operation does not save the rule automatically. To save the configuration, you need to click the **"Apply Changes"** button on the **"Port Forwarding"** page and reboot to save them to the MB5000.

Firewall: Port Forwarding









Interface	<input type="text" value="WAN"/> <p>Choose which interface this rule applies to. Hint: in most cases, you'll want to use WAN here.</p>
Protocol	<input type="text" value="TCP"/> <p>Choose which IP protocol this rule should match. Hint: in most cases, you should specify <i>TCP</i> here.</p>
External port	<input type="text" value="(other)"/> <p>Start <input type="text" value="8080"/> - End <input type="text" value="8080"/></p> <p>Specify the port on the firewall's external address for this mapping.</p>
NAT IP	<input type="text" value="172.16.0.101"/> <p>Enter the internal IP address of the server on which you want to map the ports. e.g. <i>172.16.0.3</i></p>
Local port	<input type="text" value="(other)"/> <p>Start <input type="text" value="80"/> - End <input type="text" value="80"/></p> <p>Specify the port on the machine with the IP address entered above.</p>
Auto forward	<input type="checkbox"/> Enable Hint: specify if auto add one access rule for allow this packet to forward .
Description	<input type="text" value="Forward TCP 8080 to internal HTTP server."/> <p>You may enter a description here for your reference (not parsed).</p>

- **Interface:** Currently, there's only one option of "**WAN**".
 - **Protocol:** Indicates which protocol will be forwarded in this port forwarding rule.
Three options available: **TCP**, **UDP**, **TCP/UDP**. The "**TCP/UDP**" option means that both TCP and UDP are applied.
 - **External port:** Indicates which ports in the incoming packets will be forwarded.
 - **NAP IP:** This indicates the IP address of the internal host which the certain packets would be forwarded to.
 - **Local port:** To which port on the internal host the certain packets should be forwarded.
 - **Auto forward:** Always enabled, unless this rule has been disabled on "**Firewall**" -> "**Port Forwarding**" page.
 - **Description (optional):** Comments to this rule.
3. Click the "**Apply Changes**" button to save all of the changes and click "**Reboot**" to save them to MB5000 and reboot the device.

Firewall: Port Forwarding

 The firewall port forwarding rule configuration has been changed. You must apply the changes in order for them to take effect.

Apply Change

Interface	Protocol	Ext. port	NAT ip	Int. port	Enable	Configure
WAN	TCP	8080	172.16.0.101	HTTP	<input checked="" type="checkbox"/>	   
WAN	TCP	8021	172.16.0.102	FTP	<input checked="" type="checkbox"/>	   

Add **Defaults**

- **Enable Checkbox:** Check or uncheck this box to enable or disable this entry.
- **Move up, Move down:** Re-arrange the order of each item in the list.
- **Apply Change:** Click the **Apply Change** button to validate the change immediately. No reboot is needed here.
- **Add:** Click the **Add** button, a pop-up window to add a port forwarding entry will appear.