Port forwarding for Tilgin HG2381

Port forwarding is currently only being used for IPv4 addresses. Tilgin is developing firmware which will allow usage of IP Filtering for IPv6 addresses.

To change your port forwarding parameters, connect your personal computer via ethernet cable or via wifi to the router. Open a web browser and type **192.168.1.1** in the search line of the browser. You should then see a login page, as below (Image 1).

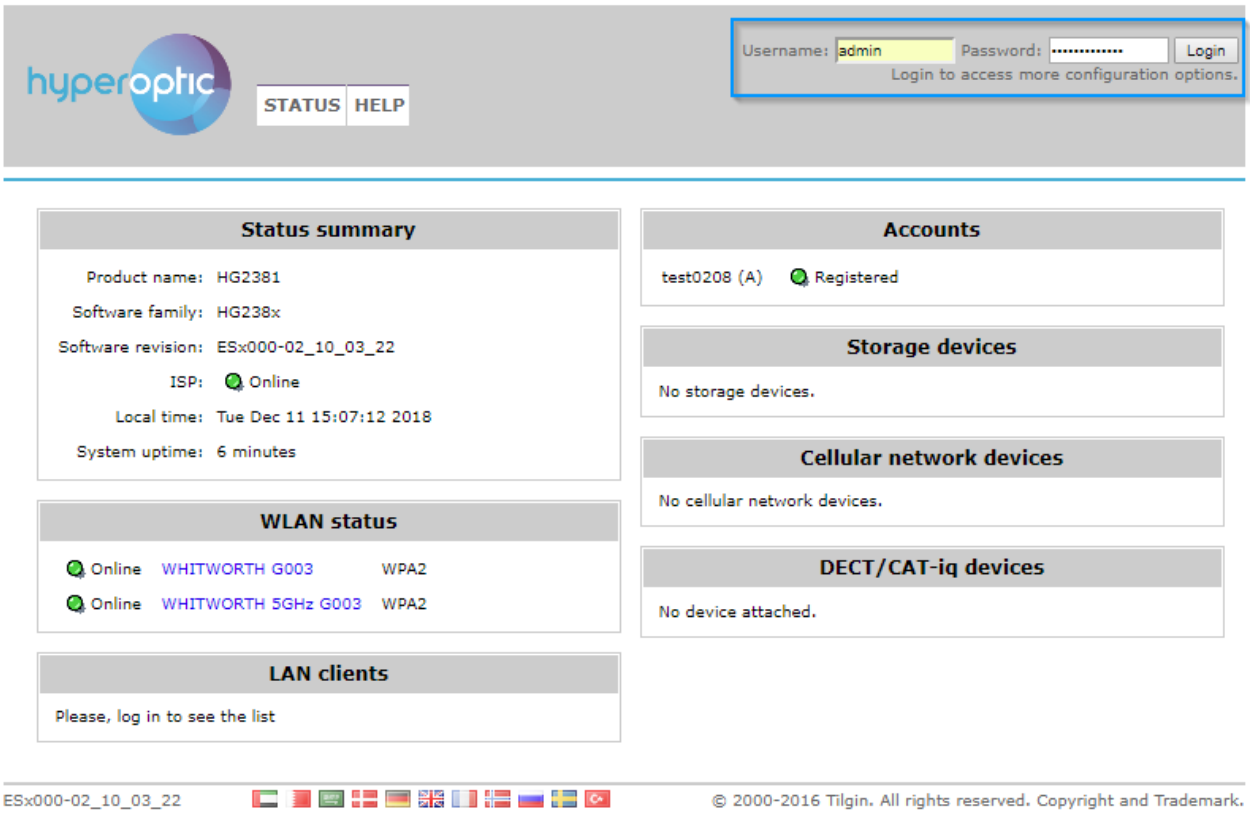


Image 1. Login page of the router

In the Username field, type "**admin**". You'll be able to find the password associated with your router written on the back of the router itself. Once identified, type this into the Password field.

Once logged in, navigate to **Advanced > Port forwarding**, as illustrated in Image 2.

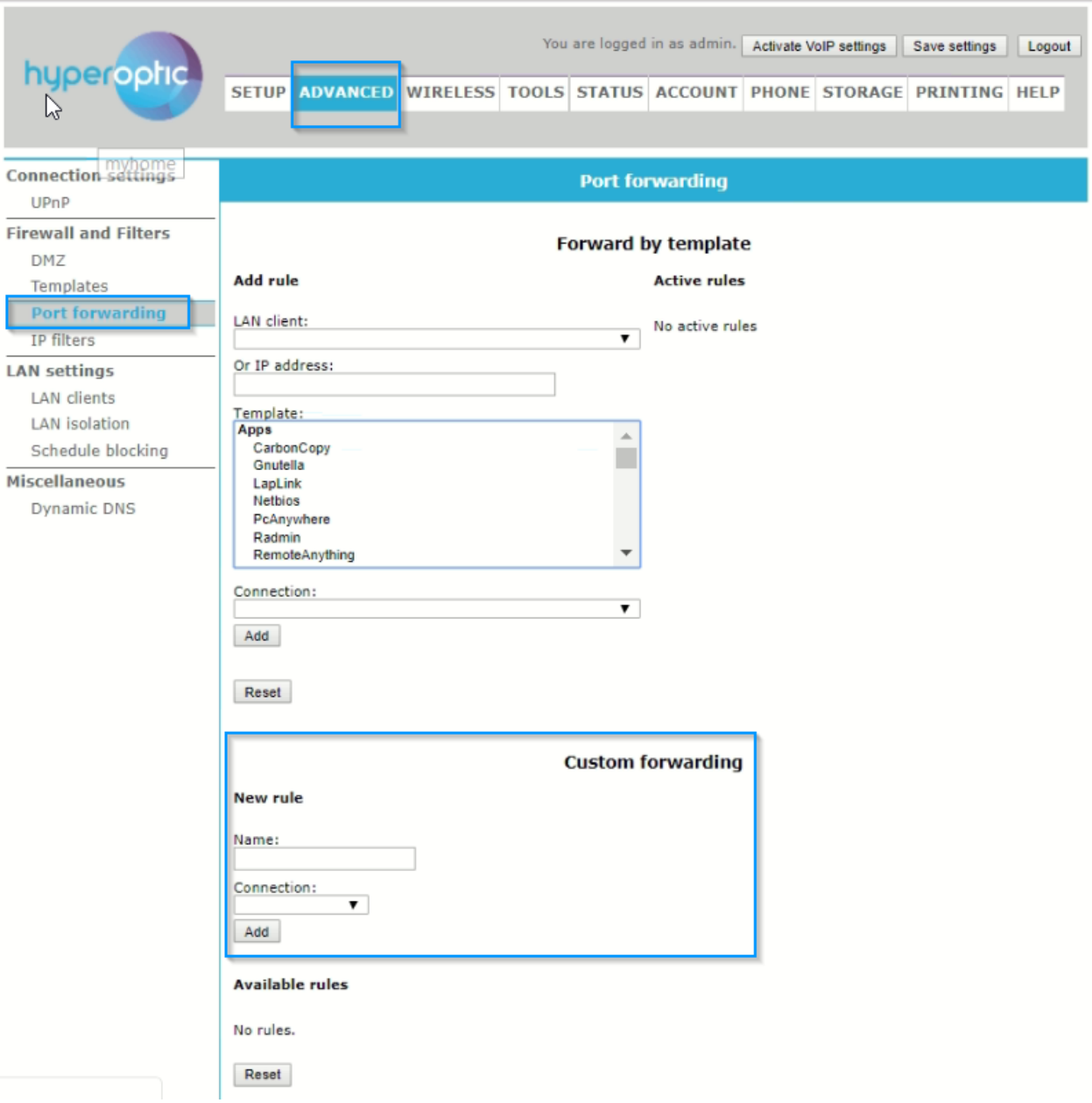


Image 2. Port forwarding section of the router web UI

At the bottom of this page, refer to "Custom forwarding". Name the port forwarding rule and associate WAN connection to it. The connection type should be **dhcp-over-eth**. An example of the creation of a port forwarding rule for local web server is illustrated in Image 3. Once the **Name** and **Connection** type are set, click **Add**.

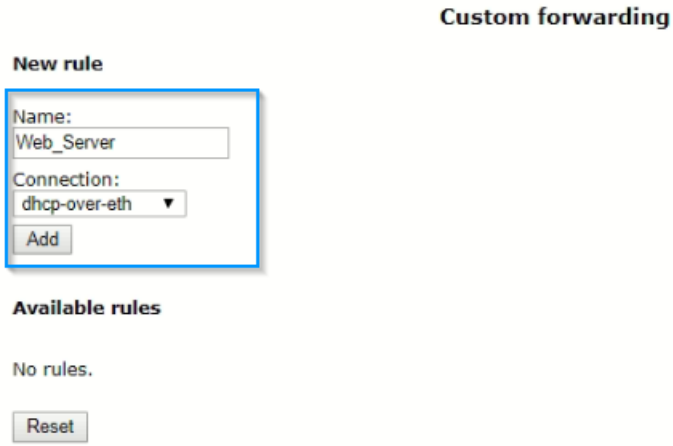


Image 3. Creating web server port forwarding rule

Image 4 illustrates the main parameter configuration of port forwarding rules.

First, thick on **Enabled** field to make the port forwarding rule active.

Check your personal computer's private IPv4 address and type it in the **Destination IP address** field.

List which ports need to pass the router's firewall. In the example illustrated in Image 4, the **TCP** port **8080** which will serve local Web server placed in LAN.

If the web server needs to be seen from any public IPv4 address, type **0.0.0.0** in the **Source IP address** and list **prefix length as 0**. Otherwise, if the web server needs to be accessed from just one IPv4 address, list that one address as illustrated in Image 4.

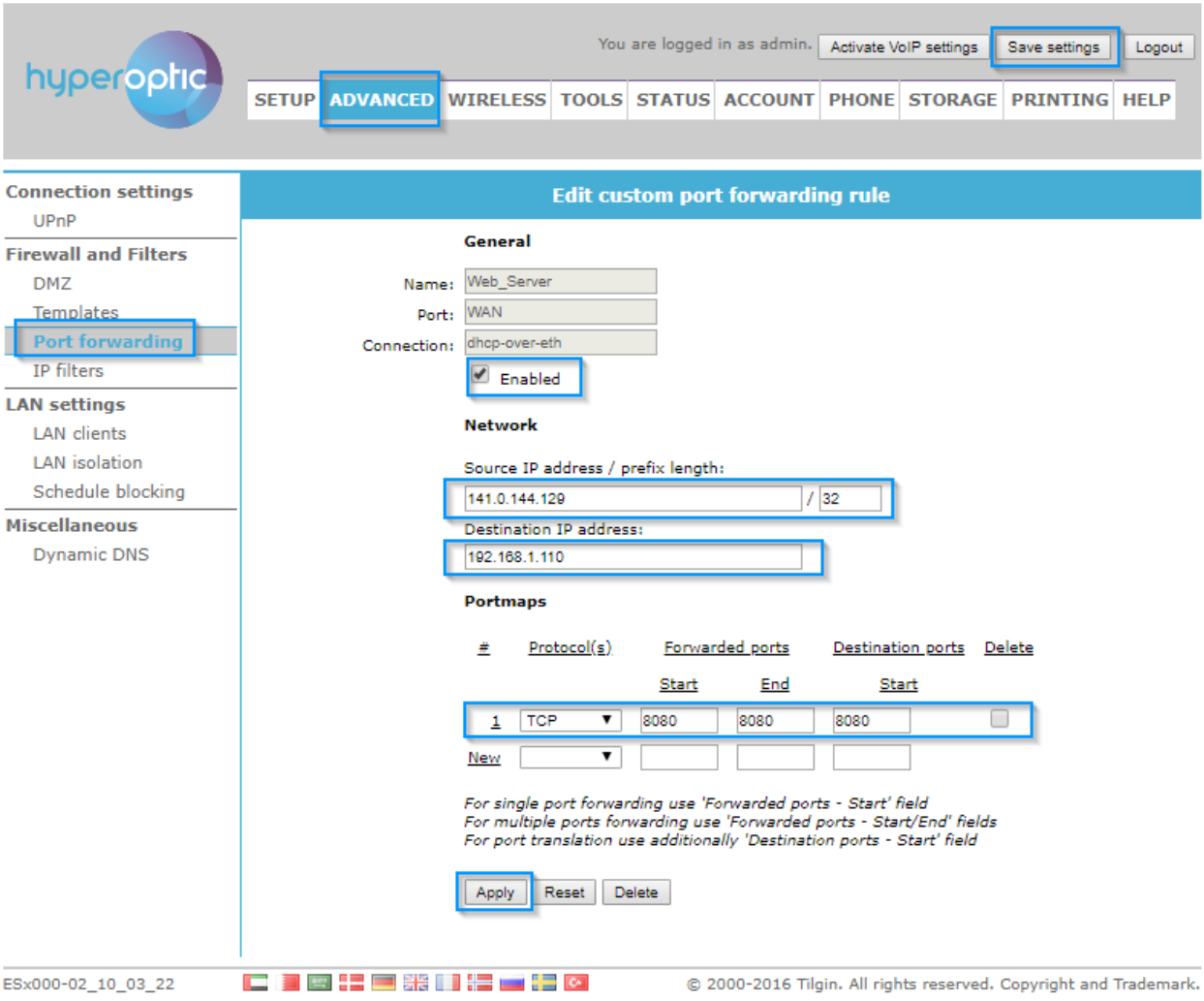


Image 4. Configuring port forwarding rules

Once all parameters are entered, click **Apply**. Save the router configuration by clicking **Save settings** in the upper right corner of the screen.

A list of commonly used ports is illustrated in Image 5.

Please also note that ports 80 and 443 **should never be used on WAN side**, as these ports are reserved for Hyperoptic. remote management. If you would like to use these ports on your server in a LAN, then you can use different ports on WAN side as shown Image 6 (e.g. you can use ports on WAN side 12000, 12001 and map them to LAN ports 80, 443 respectively). For additional help on port numbers and TCP/UDP, please refer to https://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers

Port Number(s)	Protocol	Application
20	TCP	FTP data
21	TCP	FTP control
22	TCP	SSH
23	TCP	Telnet
25	TCP	SMTP
53	UDP, TCP	DNS
67	UDP	DHCP Server
68	UDP	DHCP Client
69	UDP	TFTP
80	TCP	HTTP (WWW)
110	TCP	POP3
161	UDP	SNMP
443	TCP	SSL
514	UDP	Syslog
16,384 – 32,767	UDP	RTP (voice, video)

Image 5. List of commonly used ports

Alternatively, it's possible to allow a certain range of WAN ports that will all be translated into one LAN port. This kind of configuration is illustrated in Image 6. In this case, a local web server placed in LAN is listening for connections on port **8080**. The router will forward all connection requests that come to WAN router port **12001** to this local server.

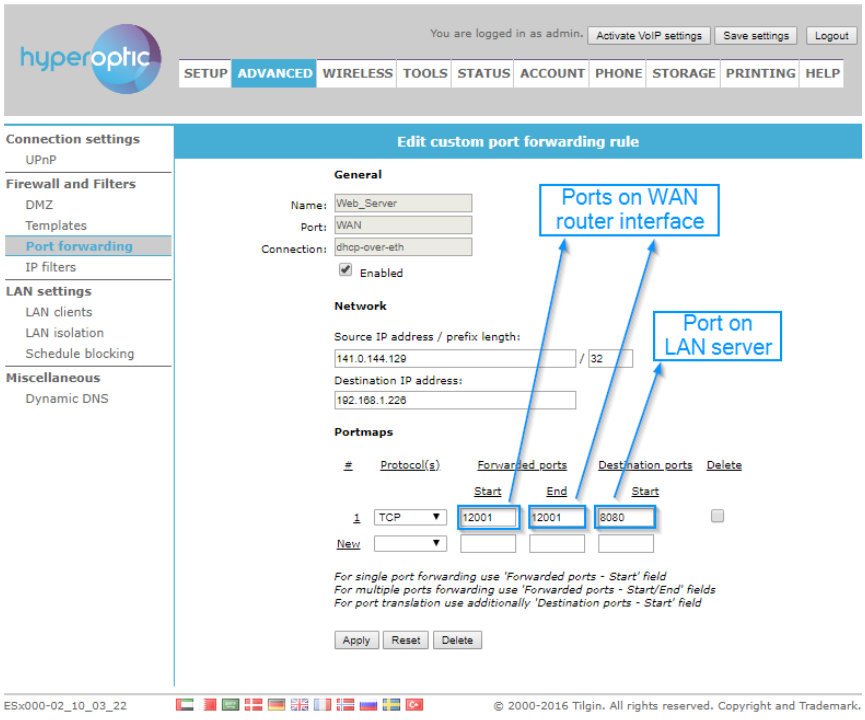


Image 6. Port forwarding with port mapping from WAN to LAN side

DMZ manual for Tilgin HG2381

If a LAN device needs to be placed in a demilitarized zone, navigate to section DMZ as illustrated in Image 7 (**Advanced > DMZ**). Devices placed in DMZ will not be affected by a router's firewall. **Placing LAN devices in DMZ can therefore pose an IT security risk and this action should be taken with caution**.

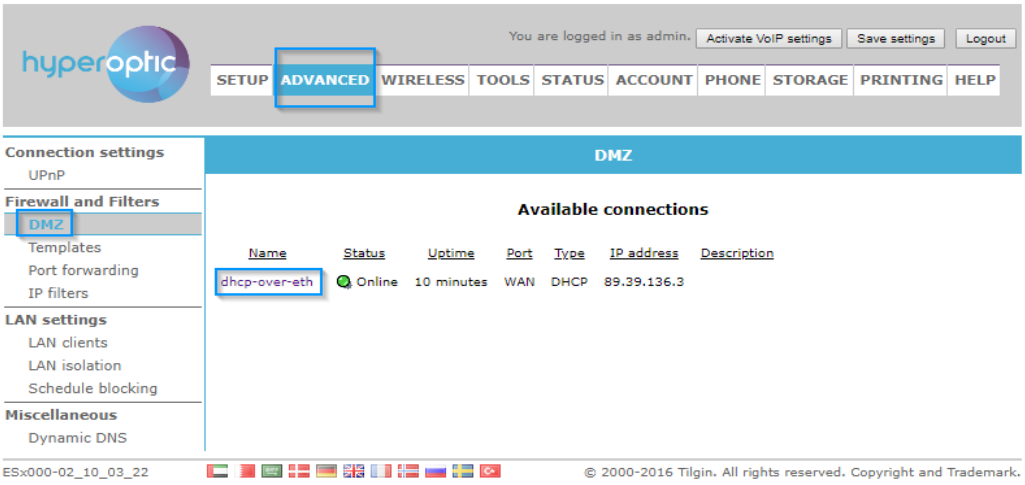


Image 7. DMZ section of router

Click on the Name of the connection – **dhcp-over-eth**. You should then be presented with Image 8.

List the IPv4 address of the LAN device and click **Apply**.

Save settings in the upper right corner of the screen.

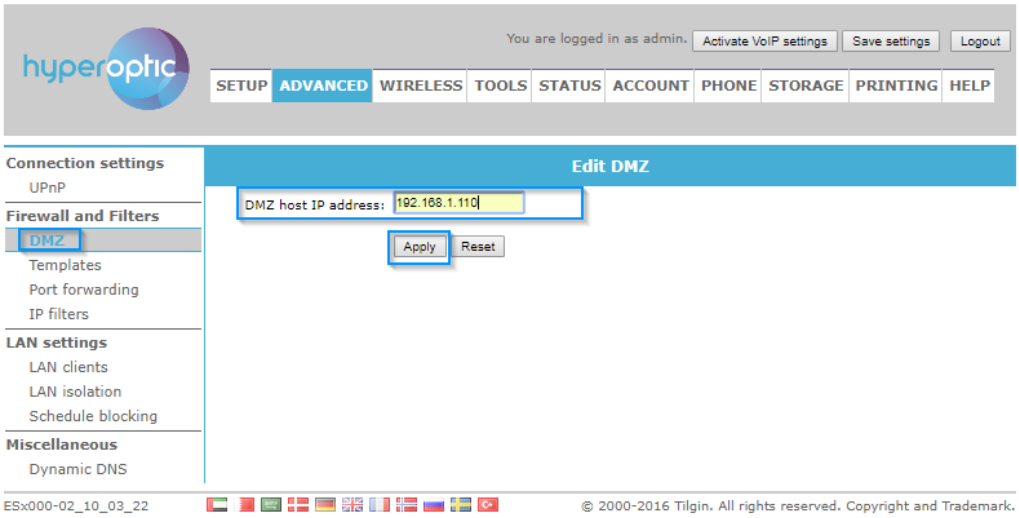
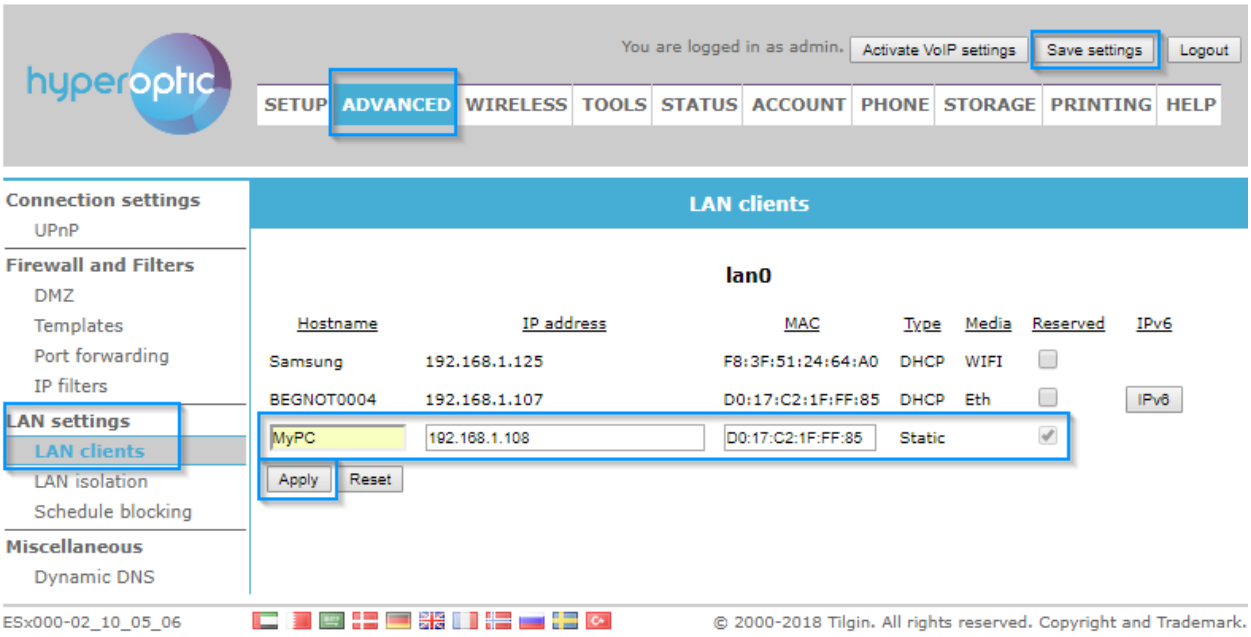


Image 8. List LAN device which needs to be placed in DMZ

DHCP binding for Tilgin HG2381

Specific LAN clients can have the same IPv4 address all the time. In order to define which LAN client will have which IPv4 address, configuration of binding must be completed. This illustrated in Image 9. Navigate to section **Advanced > LAN settings > LAN clients**.



9. DHCP host binding

Use any **Hostname**, List wanted IPv4 address and list MAC address of LAN client. The valid range of IPv4 addresses is **192.168.1.100** to **192.168.1.254** . After the configuration is made click **Save settings**.