

Contents

Router login	2
Reboot and factory reset.....	3
LAN clients	4
Wifi password and SSID change.....	5
WPS connection.....	7
Creating a new SSID	9
Deleting an existing SSID.....	10
Changing your wifi channel.....	11
Wifi authentication	13
Parental control	14
Change of DNS.....	15
UPnP router configuration.....	17
USB storage.....	18

Router login

To log into your router, open a web browser (for example, Google Chrome, Microsoft Edge, Mozilla Firefox etc.). Type **192.168.1.1** in the address bar of the browser. You should then see a login page (Image 1). In the Username field, type **admin**. In the Password field, type the password shown on the sticker on the back of your router. Once all fields are populated, press **Login**.

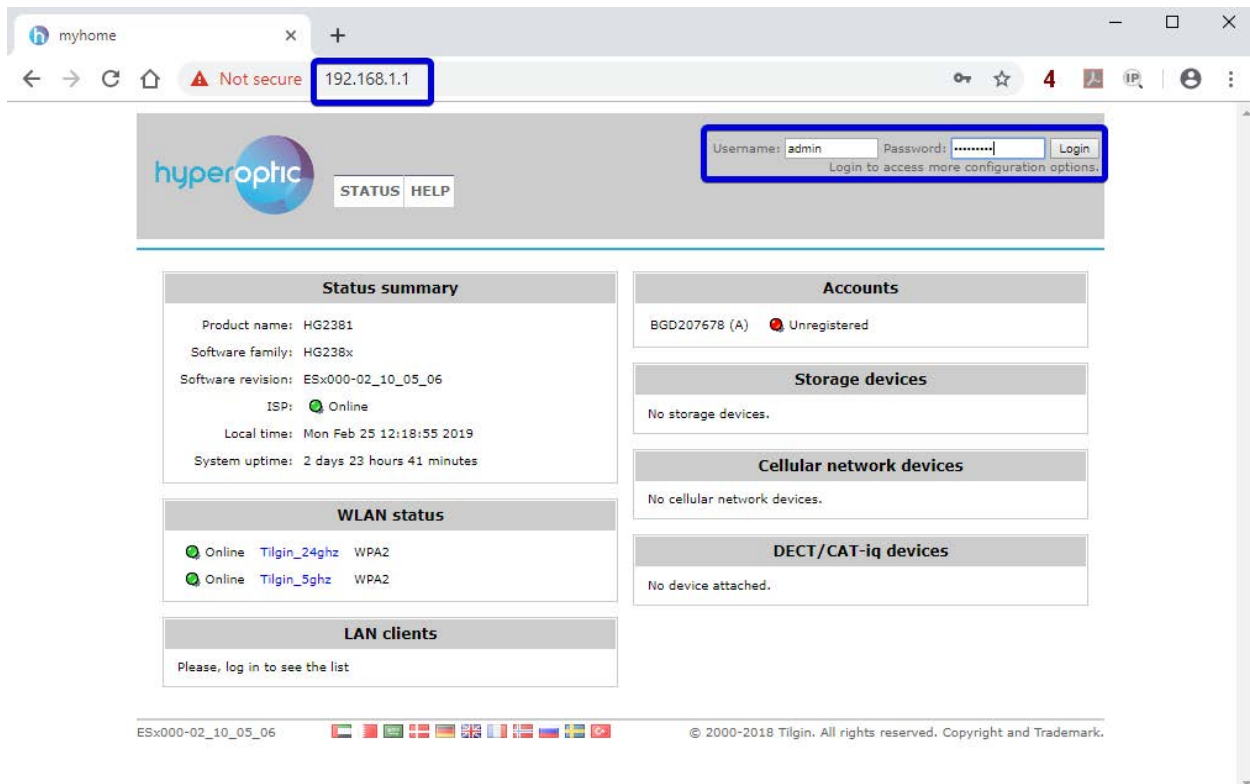


Image 1. Router HG2381 login screen

Reboot and factory reset

You can reboot your router via the web. Once you've logged in (see page 2), navigate to **Tools > Maintenance > Restart system**. Click on **Restart system**. See Image 2.

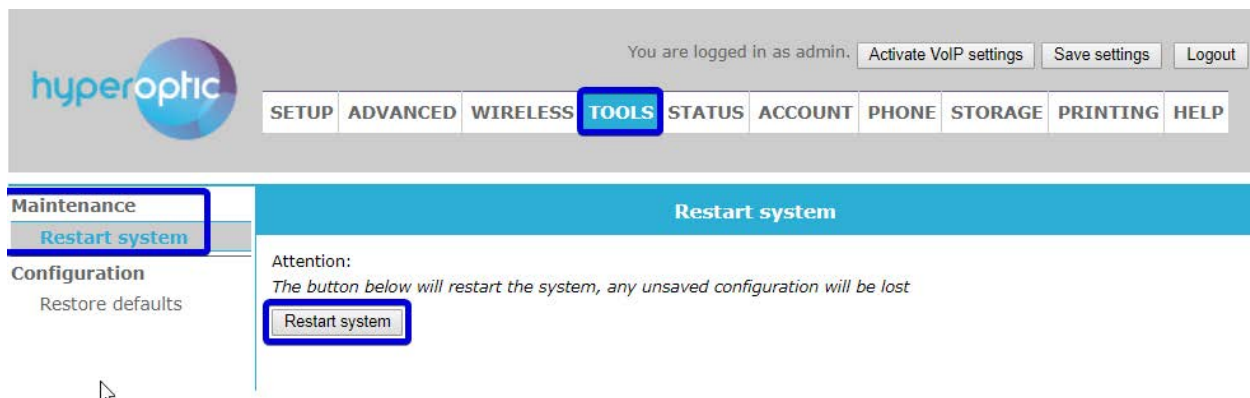


Image 2. Rebooting your router

To restore factory settings, navigate to **Tools > Configuration > Restore defaults**. Click on **Restore factory defaults**. See Image 3.

Please note, factory reset isn't recommended as it can shorten the life of a router if used often. Also, factory reset will delete any user-made configuration, such as wifi SSID, wifi password, port forwarding rules, etc.

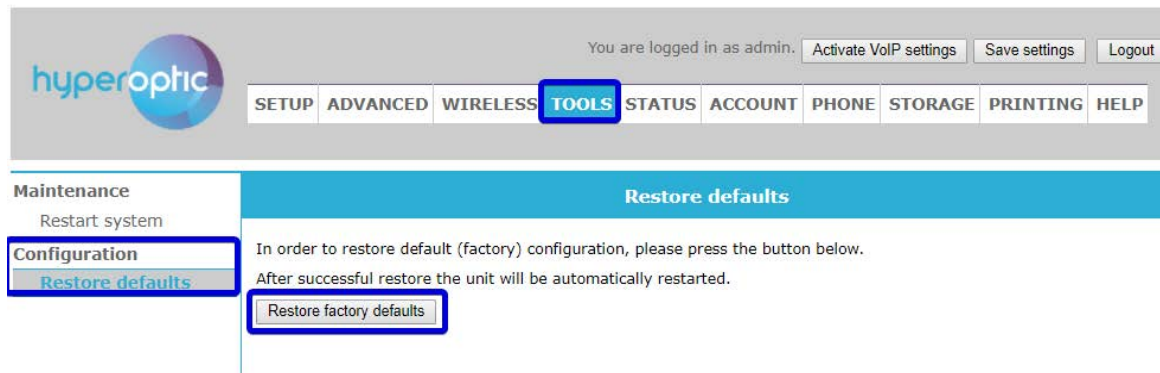


Image 3. Restoring factory settings

LAN clients

The number of LAN (Local Area Network) clients, their MAC addresses and associated IPv4 addresses can be checked once you're logged into your router (see page 2). Navigate to **Advanced > LAN settings > LAN clients**. The connection type will be listed for every LAN client (see Image 4), and you'll be able to see all the devices that are using your router's LAN.

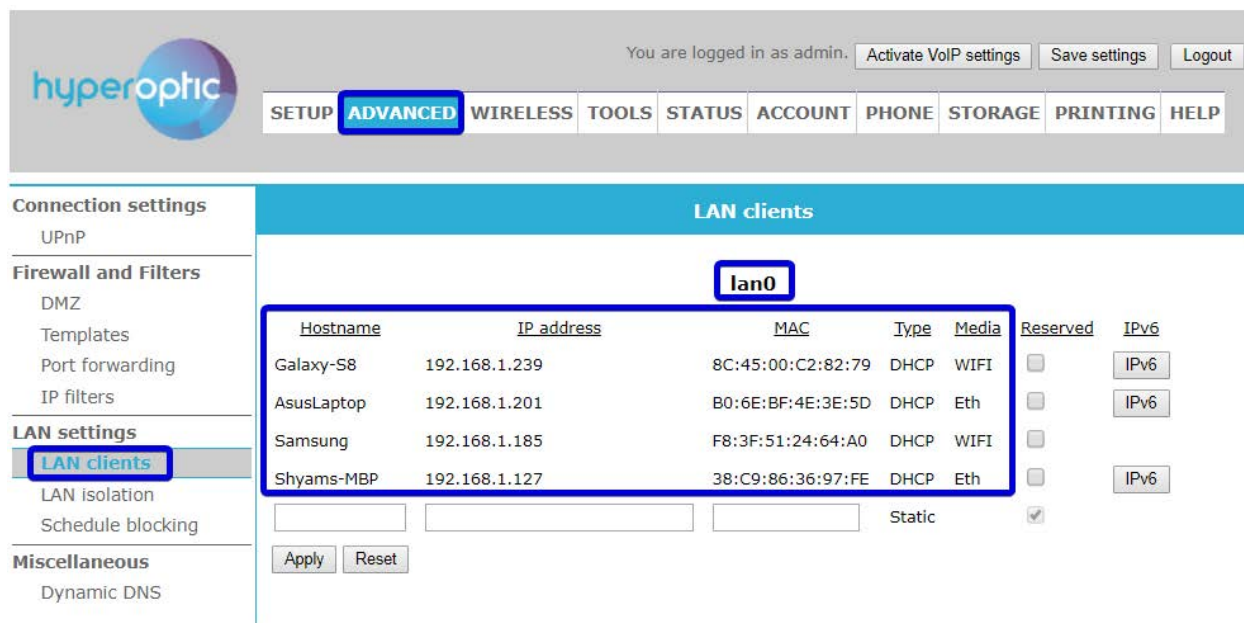
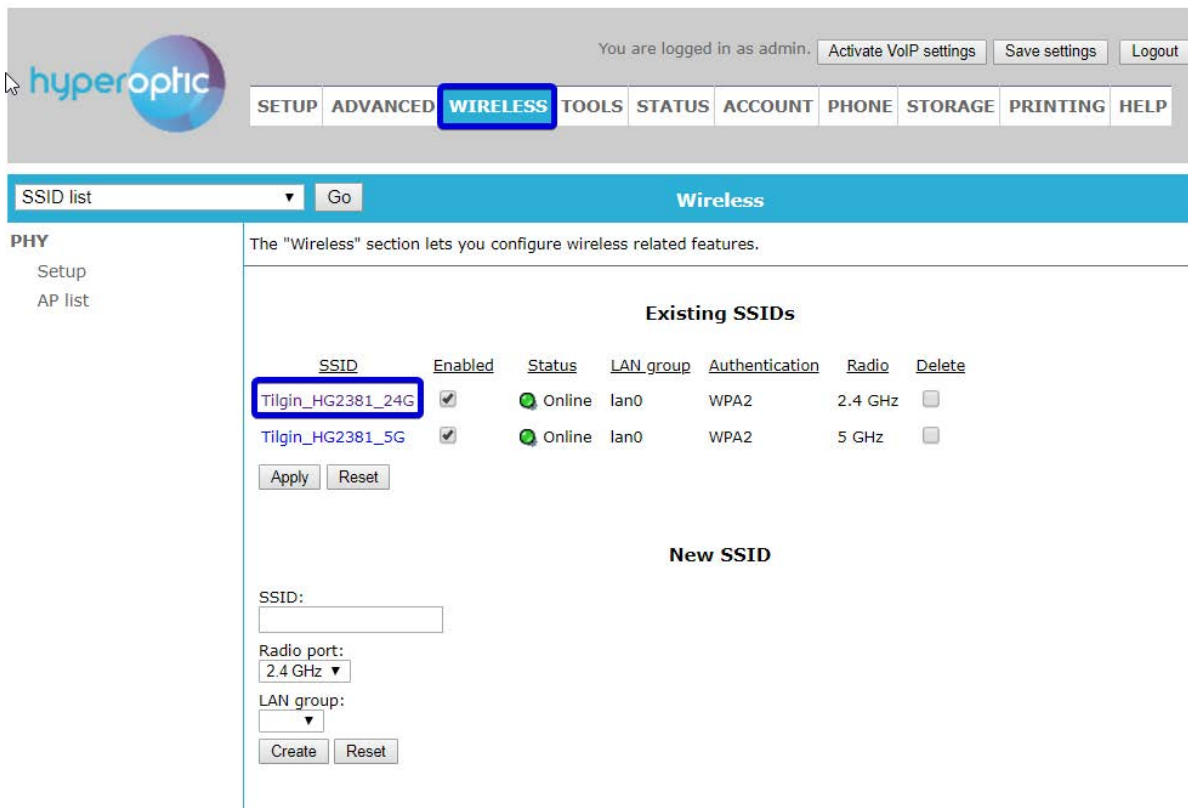


Image 4. Overview of LAN clients

Wifi password and SSID change

To change your wifi password or name for 2.4 GHz or 5 GHz bands, log into your router (see page 2) and navigate to **Wireless**. To change the parameters of your wifi connection, click on the SSID in **Existing SSIDs**. Configuration changes are the same for 2.4 GHz and for 5 GHz. See Image 5, where we've used 2.4 GHz for demonstration purposes.



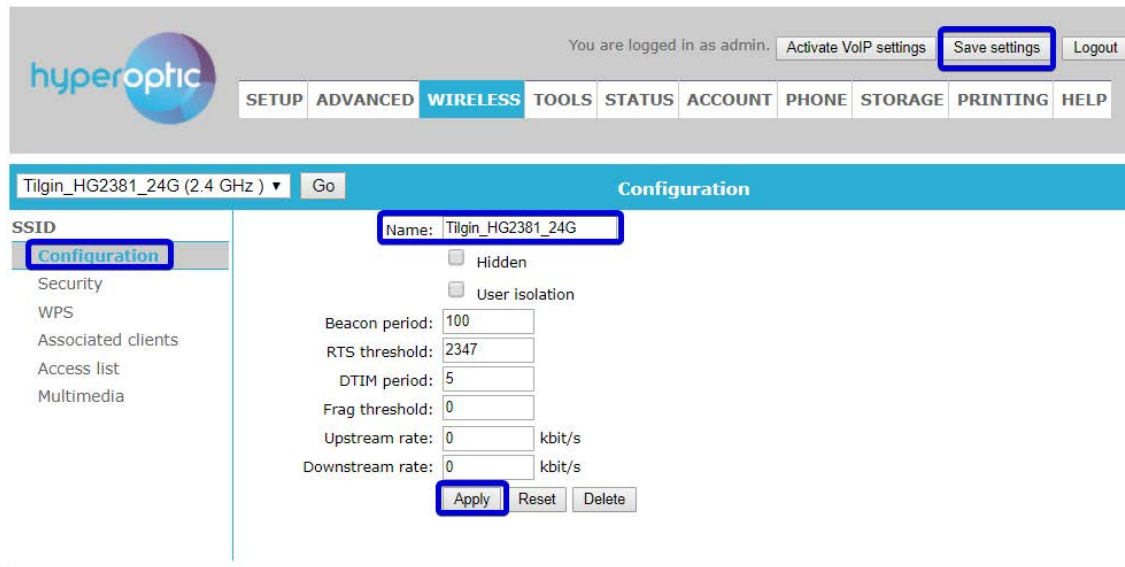
The screenshot shows the router's admin interface. At the top, there's a navigation bar with the hyperoptic logo and a menu: SETUP, ADVANCED, **WIRELESS** (highlighted), TOOLS, STATUS, ACCOUNT, PHONE, STORAGE, PRINTING, and HELP. Below the menu, there's a "Wireless" section header. On the left, under "PHY", there are links for "Setup" and "AP list". The main content area is titled "Existing SSIDs" and contains a table with the following data:

SSID	Enabled	Status	LAN_group	Authentication	Radio	Delete
Tilgin_HG2381_24G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	2.4 GHz	<input type="checkbox"/>
Tilgin_HG2381_5G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	5 GHz	<input type="checkbox"/>

Below the table are "Apply" and "Reset" buttons. Under the "New SSID" section, there are input fields for "SSID:", "Radio port:" (set to 2.4 GHz), and "LAN_group:", followed by "Create" and "Reset" buttons.

Image 5. Existing wifi SSIDs

To change name of your wifi connection, navigate to **Wireless > SSID > Configuration**. Provide the name of your connection and then click **Apply** and **Save settings**. See Image 6.

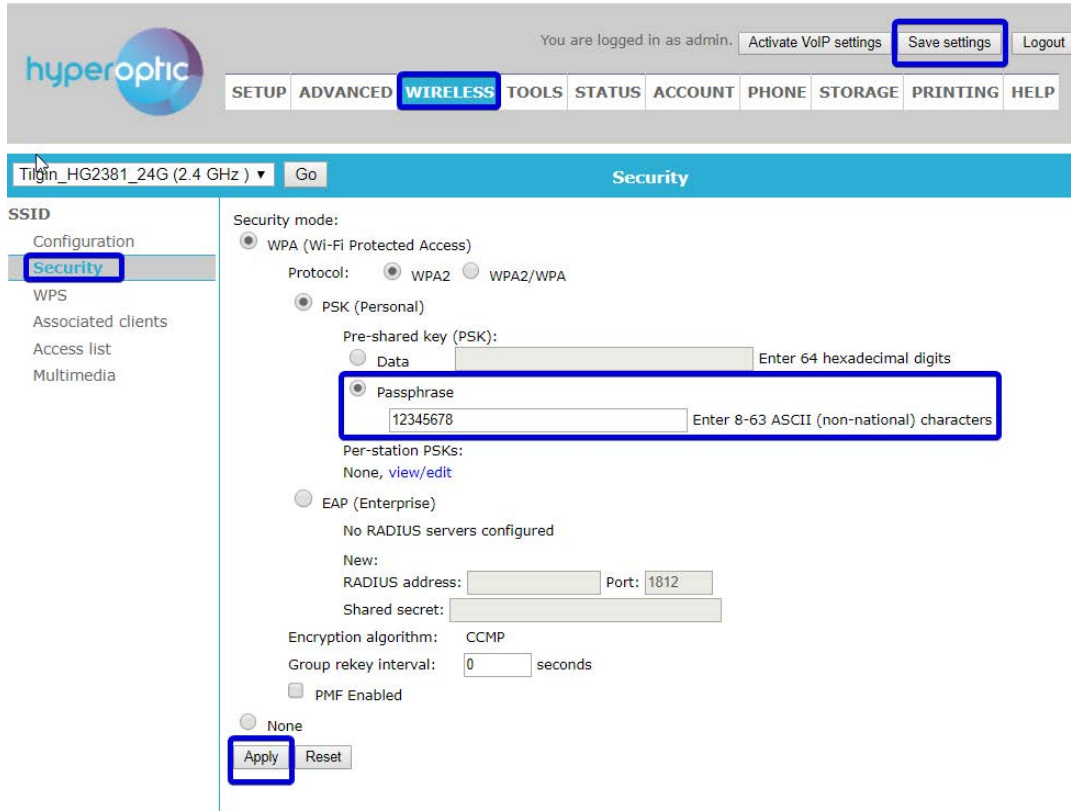


The screenshot shows the Hyperoptic admin interface. At the top, there's a header with the Hyperoptic logo, a login status "You are logged in as admin.", and buttons for "Activate VoIP settings", "Save settings", and "Logout". Below the header is a navigation menu with tabs: SETUP, ADVANCED, WIRELESS, TOOLS, STATUS, ACCOUNT, PHONE, STORAGE, PRINTING, and HELP. The "WIRELESS" tab is selected. Under "WIRELESS", there's a dropdown menu showing "Tilgin_HG2381_24G (2.4 GHz)" and a "Go" button. The main content area is titled "Configuration". On the left, there's a sidebar with "SSID" selected, and under "SSID", "Configuration" is highlighted. The main form contains the following fields and options:

- Name: Tilgin_HG2381_24G
- ☐ Hidden
- ☐ User isolation
- Beacon period: 100
- RTS threshold: 2347
- DTIM period: 5
- Frag threshold: 0
- Upstream rate: 0 kbit/s
- Downstream rate: 0 kbit/s
- Buttons: Apply, Reset, Delete

Image 6. Change of 2.4GHz connection name

To change your wifi password, navigate to **SSID > Security**. See Image 7. Please use passwords containing upper and lower case letters and numbers, with a minimum of 12 characters in length. Once you've decided on a password, click **Apply** and **Save settings**.



hyperoptic

You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

[SETUP](#) [ADVANCED](#) [WIRELESS](#) [TOOLS](#) [STATUS](#) [ACCOUNT](#) [PHONE](#) [STORAGE](#) [PRINTING](#) [HELP](#)

Tilgin_HG2381_24G (2.4 GHz) [Go](#)

Security

SSID

- Configuration
- Security**
- WPS
- Associated clients
- Access list
- Multimedia

Security mode:

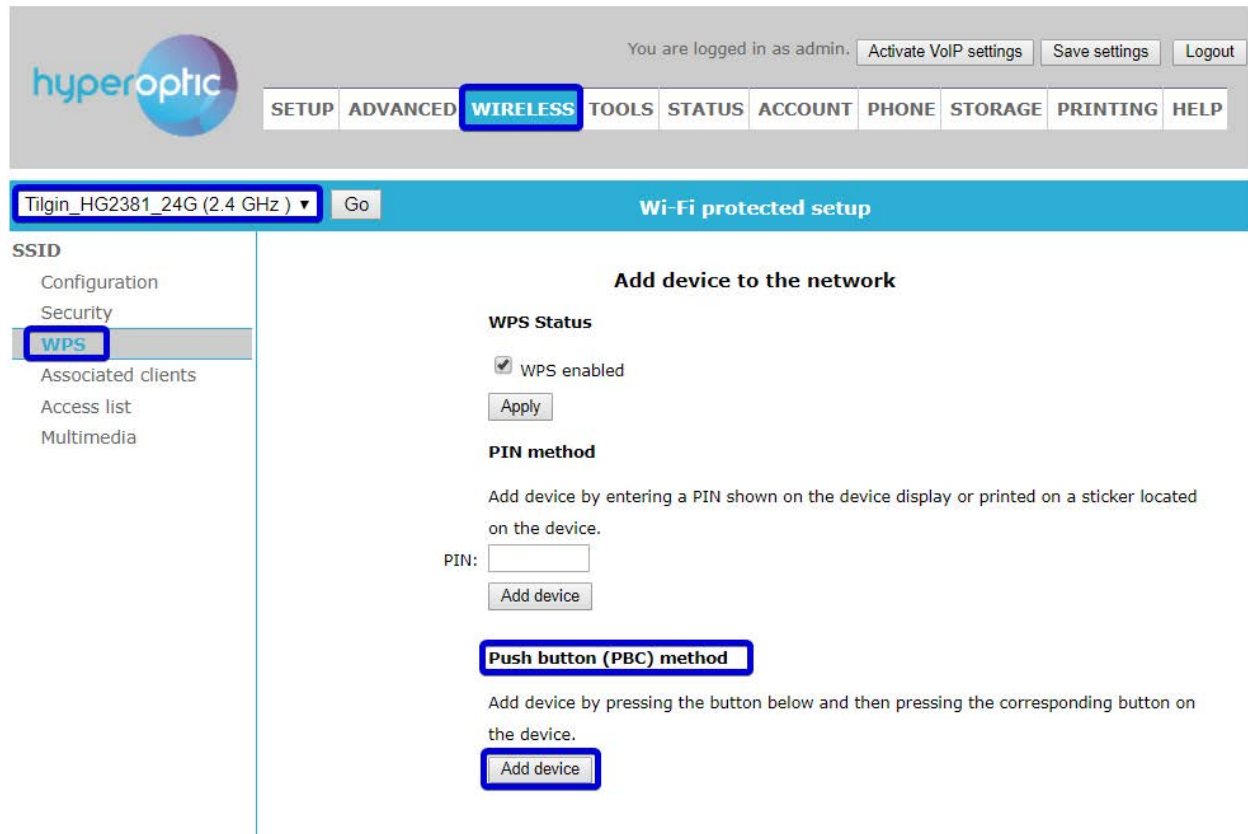
- ☒ WPA (Wi-Fi Protected Access)
 - Protocol: ☒ WPA2 ☐ WPA2/WPA
 - ☒ PSK (Personal)
 - Pre-shared key (PSK):
 - ☐ Data Enter 64 hexadecimal digits
 - ☒ Passphrase Enter 8-63 ASCII (non-national) characters
 - Per-station PSKs:
None, [view/edit](#)
 - ☐ EAP (Enterprise)
 - No RADIUS servers configured
 - New:
RADIUS address: Port:
 - Shared secret:
 - Encryption algorithm: CCMP
 - Group rekey interval: seconds
 - ☐ PMF Enabled
- ☐ None

[Apply](#) [Reset](#)

Image 7. Wifi password change

WPS connection

To connect to wifi without a password, please log in to your router (see page 2) and navigate to **Wireless**. Click on the SSID and go to **SSID > WPS**. See Image 8. Click on **Add device**. Wait a few seconds and then click WPS on LAN client. A wifi connection will then be made.



The screenshot shows the hyperoptic admin interface. At the top, there's a navigation bar with the hyperoptic logo, a login status "You are logged in as admin.", and buttons for "Activate VoIP settings", "Save settings", and "Logout". Below this is a menu bar with tabs: "SETUP", "ADVANCED", "WIRELESS" (highlighted with a blue box), "TOOLS", "STATUS", "ACCOUNT", "PHONE", "STORAGE", "PRINTING", and "HELP".

Below the menu bar, there's a blue header for the "Wi-Fi protected setup" section. It contains a dropdown menu showing "Tilgin_HG2381_24G (2.4 GHz)" and a "Go" button.

On the left side, there's a sidebar menu under the "SSID" heading with options: "Configuration", "Security", "WPS" (highlighted with a blue box), "Associated clients", "Access list", and "Multimedia".

The main content area is titled "Add device to the network". It contains the following sections:

- WPS Status**: A checkbox labeled "WPS enabled" is checked. Below it is an "Apply" button.
- PIN method**: A text instruction says "Add device by entering a PIN shown on the device display or printed on a sticker located on the device." Below this is a "PIN:" label followed by an empty input field and an "Add device" button.
- Push button (PBC) method**: A text instruction says "Add device by pressing the button below and then pressing the corresponding button on the device." Below this is an "Add device" button.

Image 8. Accessing wifi via WPS

Creating a new SSID

To create a new SSID, please log into your router (page 2) and navigate to **Wireless**. Under **New SSID**, use any name (e.g. New_2.4GHz), select **2.4 GHz** or **5GHz** radio port and select **lan0** LAN group. Click **Create**. See Image 9.

If a new 5GHz network is needed, select **5 GHz radio port** from the drop-down menu. The configuration steps for 2.4GHz SSID and 5GHz SSID are the same.



The "Wireless" section lets you configure wireless related features.

Existing SSIDs

SSID	Enabled	Status	LAN group	Authentication	Radio	Delete
Tilgin_HG2381_24G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	2.4 GHz	<input type="checkbox"/>
Tilgin_HG2381_5G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	5 GHz	<input type="checkbox"/>

Apply Reset

New SSID

SSID:
New_2.4GHz

Radio port:
2.4 GHz ▼

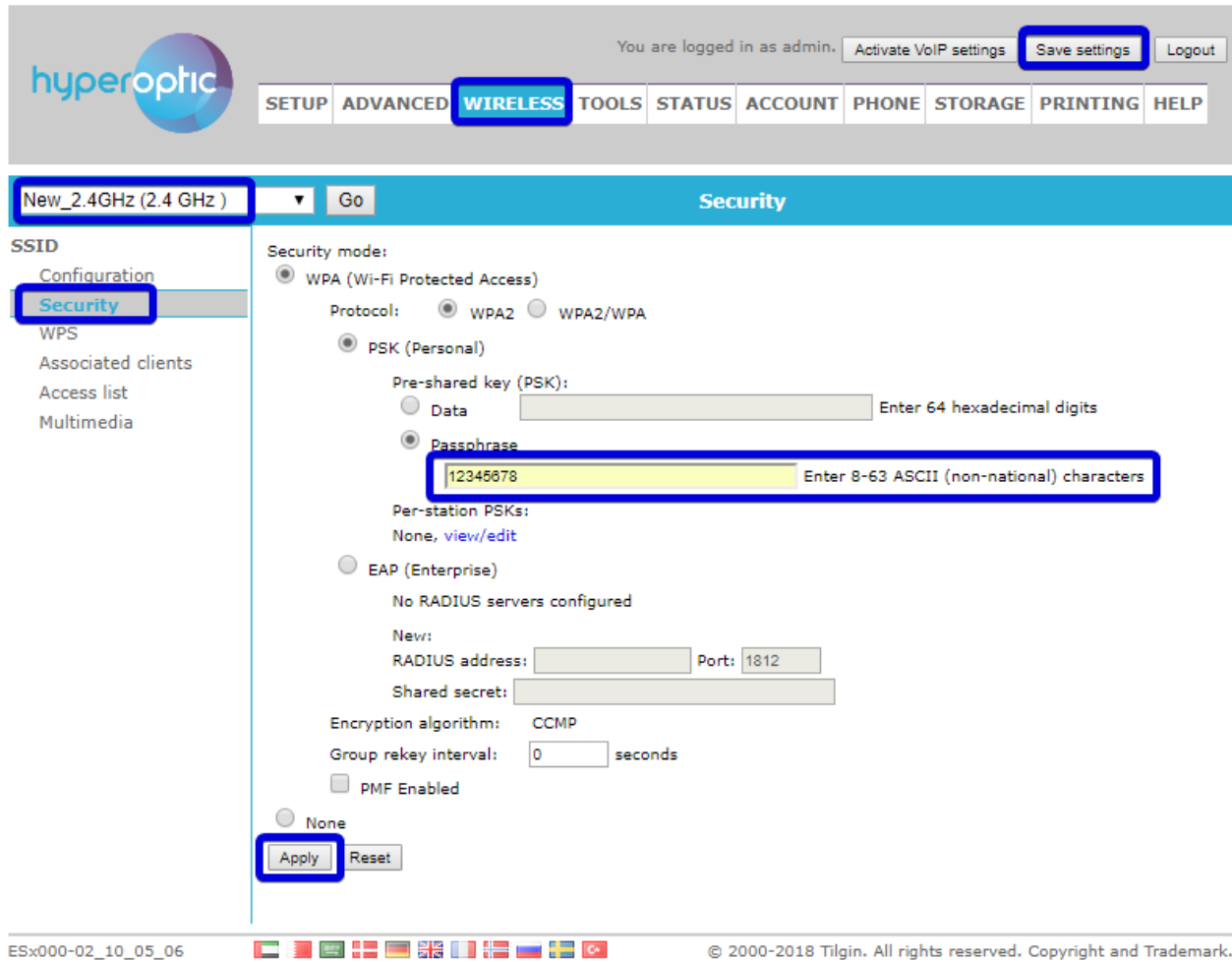
LAN group:
lan0 ▼

Create Reset

ESx000-02_10_05_06 © 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.

Image 9. Creating a new SSID

Once your new SSID (in this case 2.4GHz) is created, you can change the **passphrase** of the SSID. Click **Apply** and **Save settings** in the upper right corner of the web page (see Image 10).



hyperoptic

You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

[SETUP](#) [ADVANCED](#) [WIRELESS](#) [TOOLS](#) [STATUS](#) [ACCOUNT](#) [PHONE](#) [STORAGE](#) [PRINTING](#) [HELP](#)

New_2.4GHz (2.4 GHz) [Go](#) **Security**

SSID

- Configuration
- Security**
- WPS
- Associated clients
- Access list
- Multimedia

Security mode:

- ☒ WPA (Wi-Fi Protected Access)
 - Protocol: ☒ WPA2 ☐ WPA2/WPA
 - ☒ PSK (Personal)
 - Pre-shared key (PSK):
 - ☐ Data Enter 64 hexadecimal digits
 - ☒ Passphrase Enter 8-63 ASCII (non-national) characters
 - Per-station PSKs: None, [view/edit](#)
 - ☐ EAP (Enterprise)
 - No RADIUS servers configured
 - New:
 - RADIUS address: Port:
 - Shared secret:
- ☐ None

[Apply](#) [Reset](#)


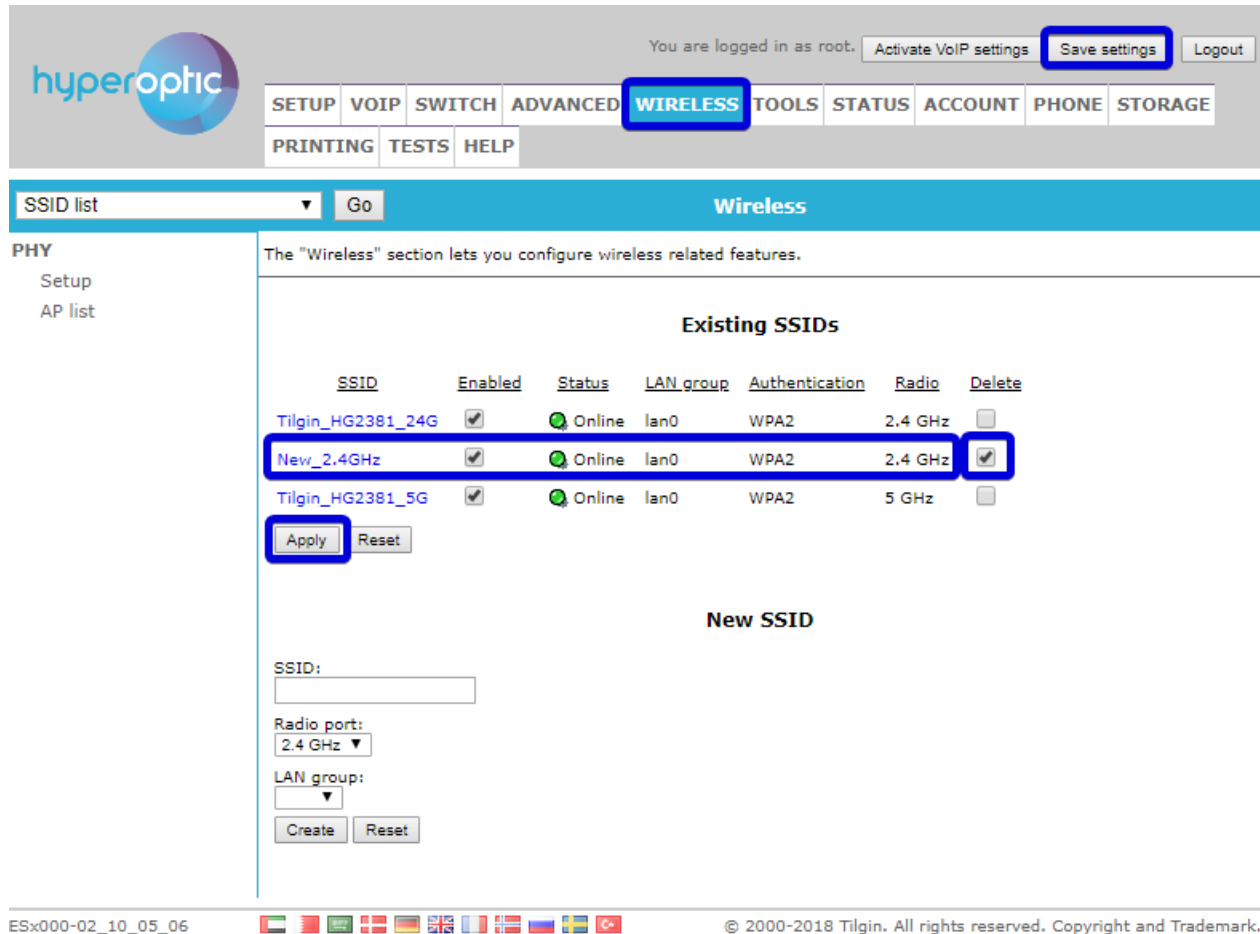
ESx000-02_10_05_06  © 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.

Image 10. Defining the passphrase for your new SSID

Deleting an existing SSID

To delete an existing SSID, please log into your router (page 2) and navigate to **Wireless**. Tick **Delete** on network you'd like to delete. Click **Apply** and **Save settings** (see Image 11).



hyperoptic

You are logged in as root. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

[SETUP](#) [VOIP](#) [SWITCH](#) [ADVANCED](#) **[WIRELESS](#)** [TOOLS](#) [STATUS](#) [ACCOUNT](#) [PHONE](#) [STORAGE](#)

[PRINTING](#) [TESTS](#) [HELP](#)

SSID list **Wireless**

PHY

- Setup
- AP list

The "Wireless" section lets you configure wireless related features.

Existing SSIDs

SSID	Enabled	Status	LAN group	Authentication	Radio	Delete
Tilgin_HG2381_24G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	2.4 GHz	<input type="checkbox"/>
New_2.4GHz	<input checked="" type="checkbox"/>	Online	lan0	WPA2	2.4 GHz	<input checked="" type="checkbox"/>
Tilgin_HG2381_5G	<input checked="" type="checkbox"/>	Online	lan0	WPA2	5 GHz	<input type="checkbox"/>

New SSID

SSID:

Radio port:

LAN group:


ESx000-02_10_05_06  © 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.

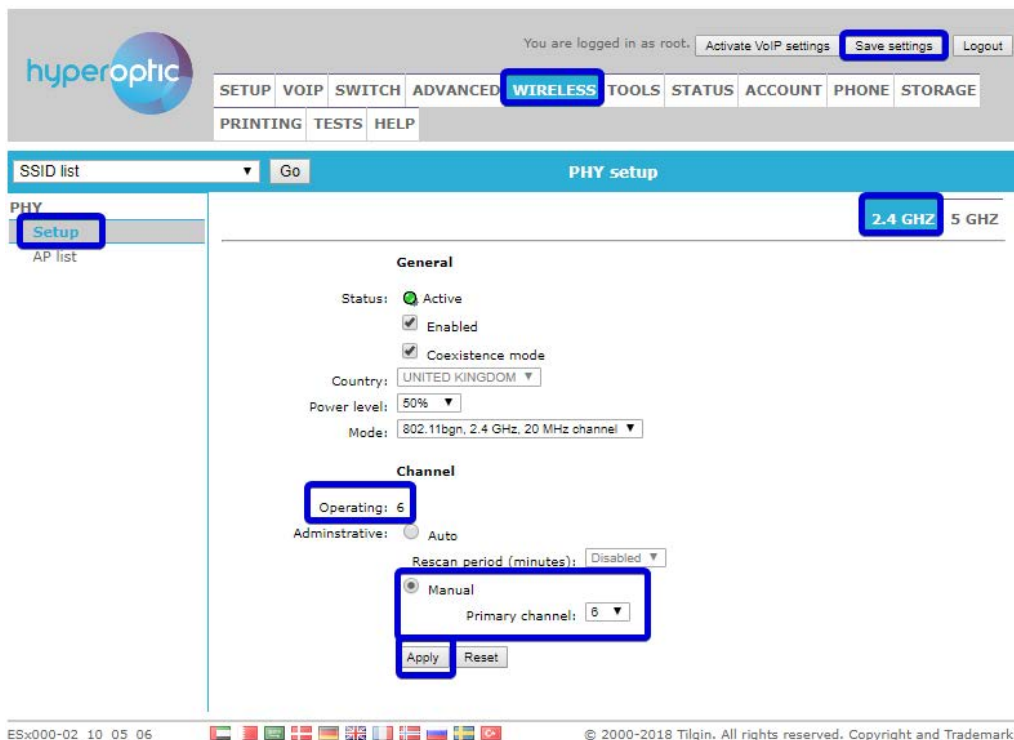
Image 11. Deleting an existing SSID

Changing your wifi channel

To minimise interference, we highly recommend leaving your wifi channel selection on its default settings. If you would like to change your channel selection, however, you can do so by logging into your router (see page 2) and navigating to **Wireless > Setup**.

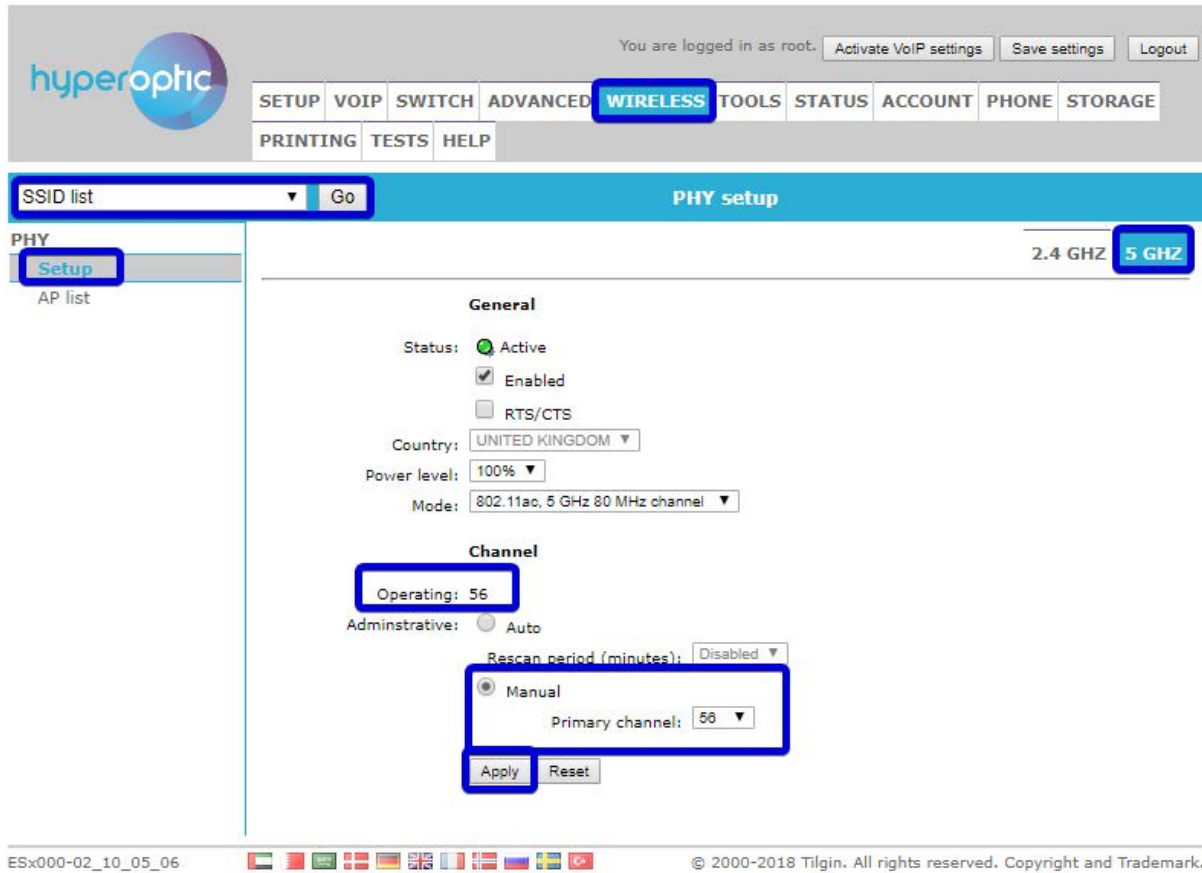
Select either **2.4GHz** or **5GHz** frequency band. Once selected, refer to **Channel**. Select **Manual** configuration and choose one of the listed channels from the drop-down menu. Click **Apply** and **Save settings**. See Image 12 and Image 13.

Note: please try to use channels 1, 6 or 11 for 2.4GHz networks.



The screenshot displays the hyperoptic router's administrative interface. At the top, the user is logged in as 'root' with options to 'Activate VoIP settings', 'Save settings', and 'Logout'. The navigation menu includes 'SETUP', 'VOIP', 'SWITCH', 'ADVANCED', 'WIRELESS' (highlighted), 'TOOLS', 'STATUS', 'ACCOUNT', 'PHONE', 'STORAGE', 'PRINTING', 'TESTS', and 'HELP'. The 'PHY setup' section is active, showing a 'PHY' dropdown set to 'Setup' and a radio button selection for '2.4 GHZ' (selected) and '5 GHZ'. The 'General' section includes 'Status: Active', 'Enabled' (checked), 'Coexistence mode' (checked), 'Country: UNITED KINGDOM', 'Power level: 50%', and 'Mode: 802.11bgn, 2.4 GHz, 20 MHz channel'. The 'Channel' section shows 'Operating: 6' (highlighted), 'Administrative: Auto', and 'Rescan period (minutes): Disabled'. Under 'Manual' configuration, 'Primary channel: 6' is selected. 'Apply' and 'Reset' buttons are at the bottom. The footer shows 'ESx000-02_10_05_06', a row of flags, and '© 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.'

Image 12. Changing channel for 2.4 GHz network



hyperoptic

You are logged in as root. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

SETUP VOIP SWITCH ADVANCED **WIRELESS** TOOLS STATUS ACCOUNT PHONE STORAGE

PRINTING TESTS HELP

SSID list Go

PHY setup

PHY

Setup

AP list

2.4 GHZ **5 GHZ**

General

Status: ☒ Active

☒ Enabled

☐ RTS/CTS

Country: UNITED KINGDOM

Power level: 100%

Mode: 802.11ac, 5 GHz 80 MHz channel

Channel

Operating: 56

Administrative: ☐ Auto

Rescan period (minutes): Disabled

☒ Manual

Primary channel: 56

[Apply](#) [Reset](#)

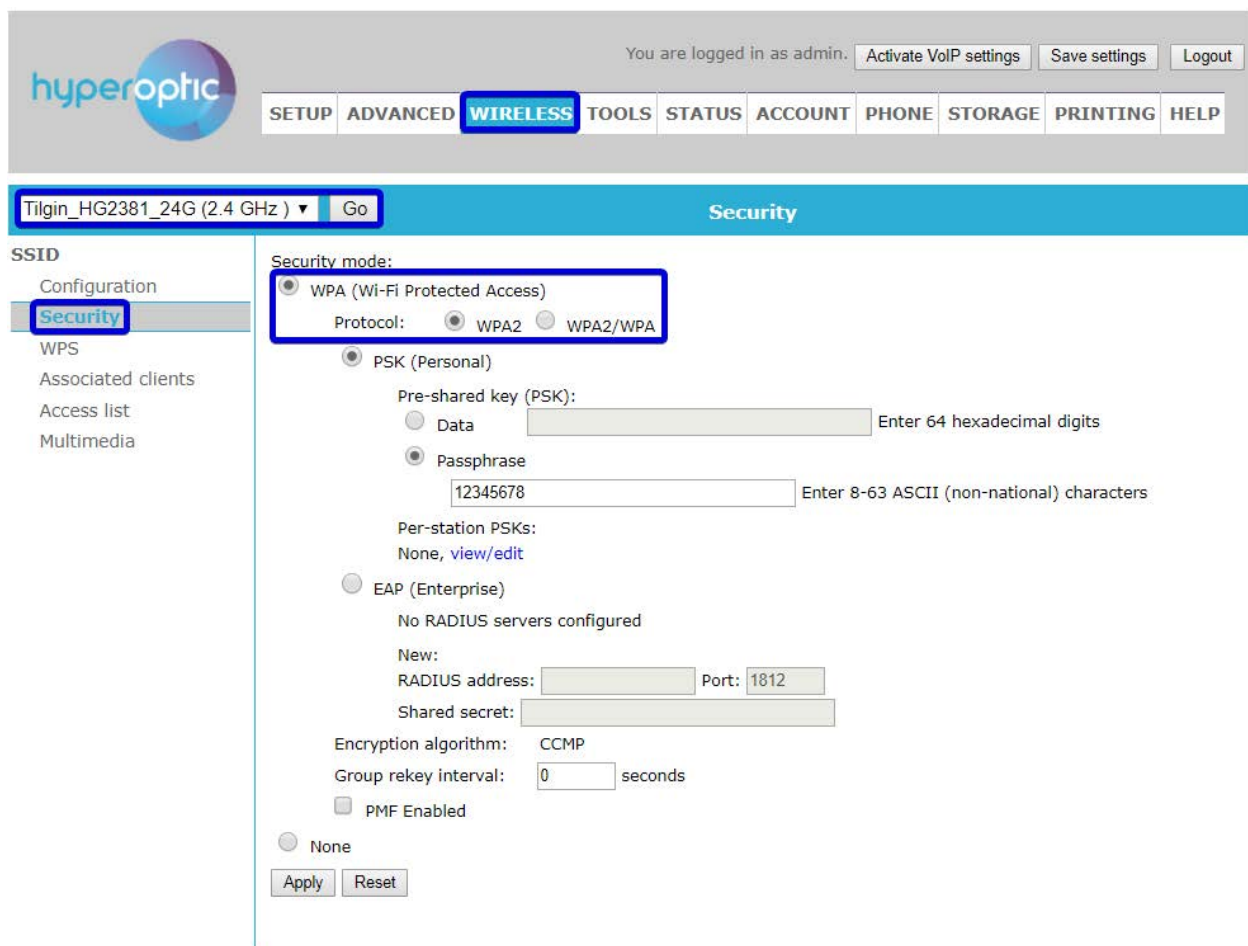
ESx000-02_10_05_06

© 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.

Image 13. Changing channel for 5GHz network

Wifi authentication

To change your wifi authentication settings, please log into your router (page 2) and navigate to **Wireless**. Click on the 2.4GHz or 5GHz connection. The configuration is the same for both connections (see Image 14, where we've used 2.4GHz for demonstration purposes). Select either **WPA2** or **WPA2/WPA** protocol. After the protocol change, click **Apply** and **Save settings**. By default, advanced encryption algorithm is used.



hyperoptic

You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

SETUP ADVANCED **WIRELESS** TOOLS STATUS ACCOUNT PHONE STORAGE PRINTING HELP

Tilgin_HG2381_24G (2.4 GHz) Go Security

SSID

- Configuration
- Security**
- WPS
- Associated clients
- Access list
- Multimedia

Security mode:

- ☒ WPA (Wi-Fi Protected Access)
Protocol: ☒ WPA2 ☐ WPA2/WPA
- ☐ PSK (Personal)
Pre-shared key (PSK):
☐ Data Enter 64 hexadecimal digits
☒ Passphrase
 Enter 8-63 ASCII (non-national) characters
Per-station PSKs:
None, [view/edit](#)
- ☐ EAP (Enterprise)
No RADIUS servers configured
New:
RADIUS address: Port:
Shared secret:
Encryption algorithm: CCMP
Group rekey interval: seconds
☐ PMF Enabled
- ☐ None

[Apply](#) [Reset](#)

Image 14. Changing wifi authentication

Parental control

Parental control can be used to restrict access to sites. To enable parental control, please log into your router (page 2) and navigate to **Advanced > LAN settings > LAN clients**. Select the device which needs to be blocked and click **Apply**. This part of the process will create static DHCP binding for certain MAC address (LAN client). See Image 15.

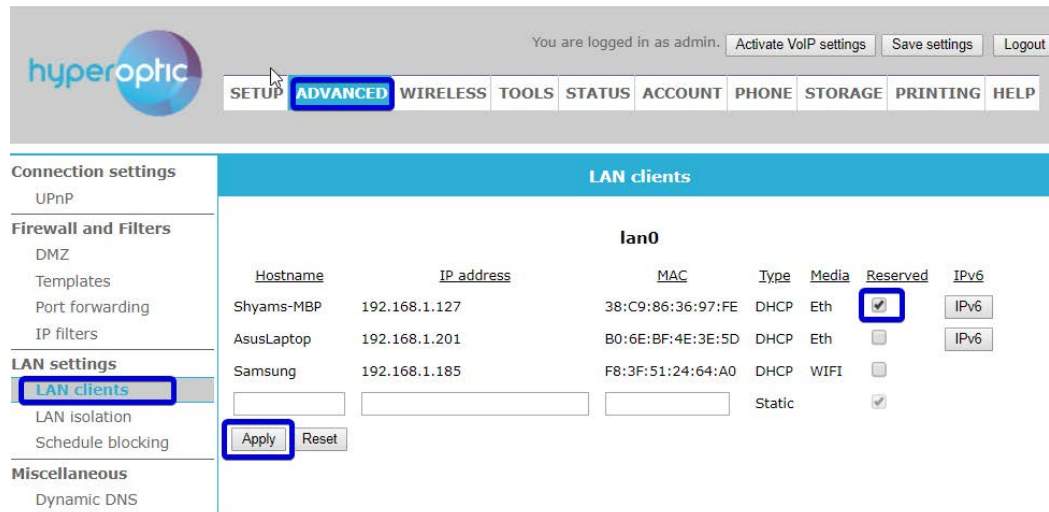


Image 15. Selecting which LAN client will be blocked

Once completed, navigate to **Advanced > LAN settings > Schedule blocking**. Select the day and time you would like to restrict access and click **Apply**. Then click **Save settings**. See Image 16.

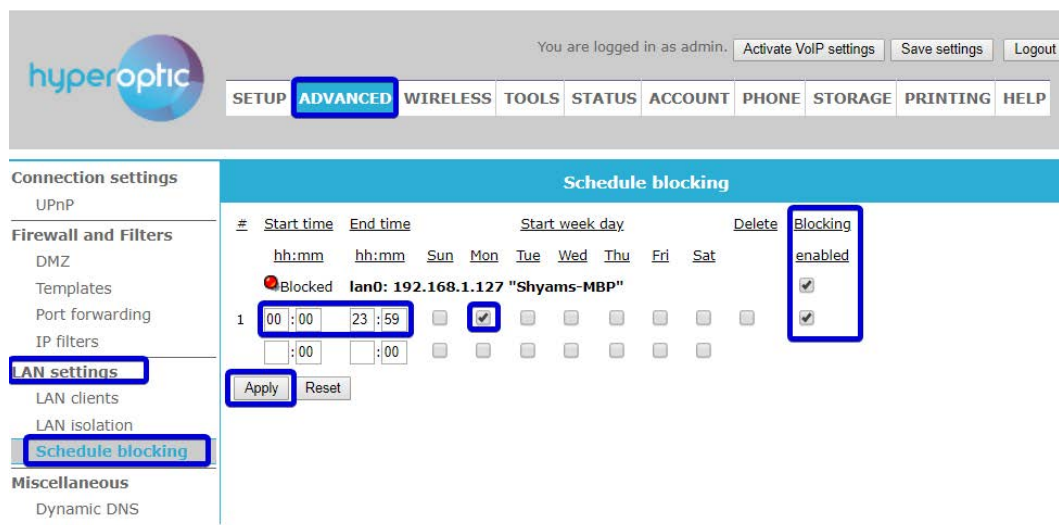
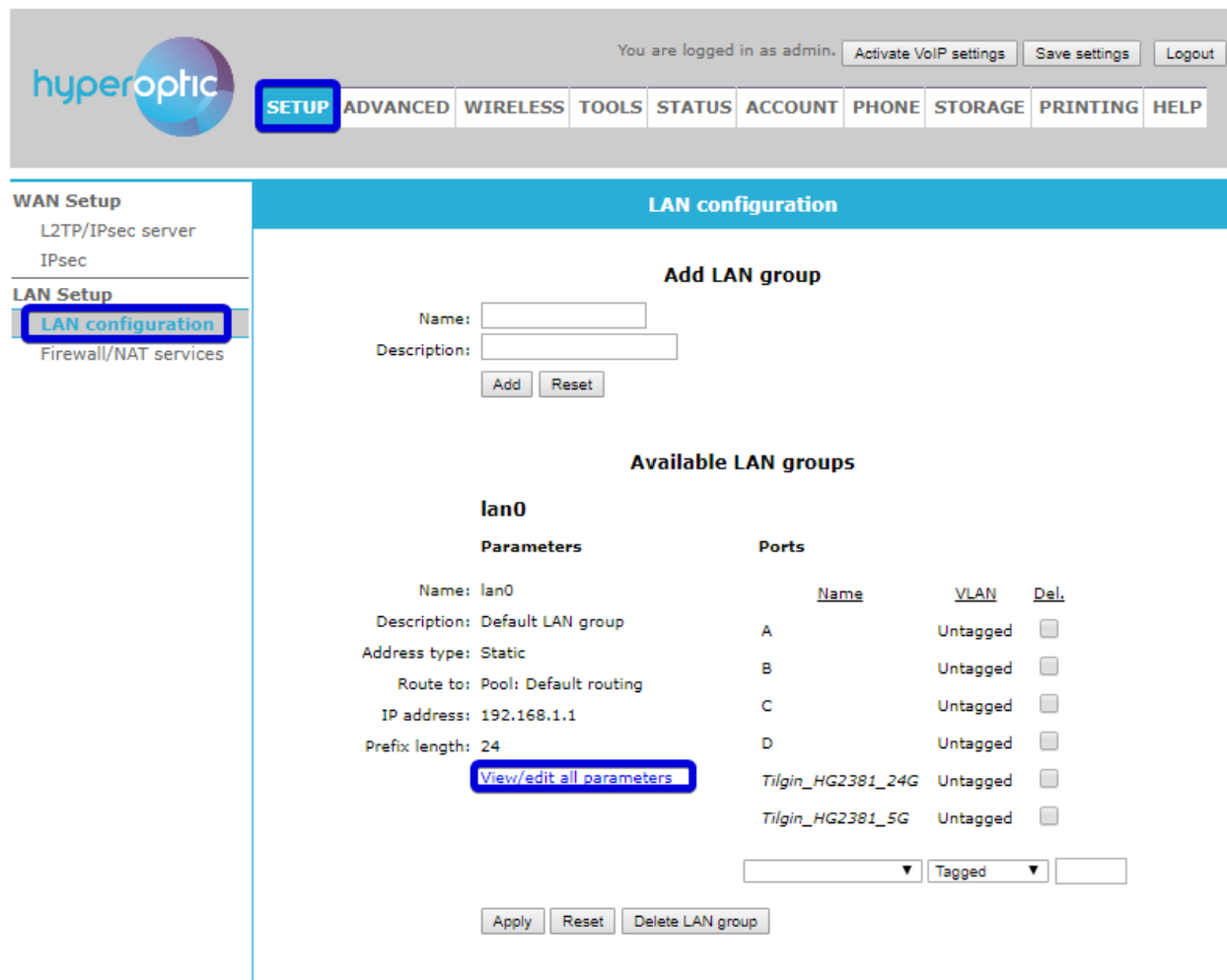


Image 16. Defining blocking time & day

Change of DNS (admin account)

To change your DNS, please log into your router (page 2) and navigate to **Setup > LAN Setup > LAN configuration**. Click **View/edit all parameters** (see Image 17). By default, the router uses two Hyperoptic DNS servers which provide redundancy and address resolution. These servers communicate directly with the WAN ethernet router port and provide means for swift browsing.



hyperoptic

You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

SETUP ADVANCED WIRELESS TOOLS STATUS ACCOUNT PHONE STORAGE PRINTING HELP

WAN Setup
L2TP/IPsec server
IPsec

LAN Setup
LAN configuration
Firewall/NAT services

LAN configuration

Add LAN group

Name:
Description:
[Add](#) [Reset](#)

Available LAN groups

lan0

Parameters

Name: lan0
Description: Default LAN group
Address type: Static
Route to: Pool: Default routing
IP address: 192.168.1.1
Prefix length: 24
[View/edit all parameters](#)

Ports

Name	VLAN	Del.
A	Untagged	<input type="checkbox"/>
B	Untagged	<input type="checkbox"/>
C	Untagged	<input type="checkbox"/>
D	Untagged	<input type="checkbox"/>
Tilgin_HG2381_24G	Untagged	<input type="checkbox"/>
Tilgin_HG2381_5G	Untagged	<input type="checkbox"/>

Tagged

[Apply](#) [Reset](#) [Delete LAN group](#)

Image 17. Navigating to DHCP LAN settings

In the "Static Address" section, look for DHCP fields as shown in Image 18. Configure the public DNS as per your choice. To enable the use of an arbitrary DNS, please **disable DHCPv6 server**. See Image 18.

hyperoptic You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

[SETUP](#) [ADVANCED](#) [WIRELESS](#) [TOOLS](#) [STATUS](#) [ACCOUNT](#) [PHONE](#) [STORAGE](#) [PRINTING](#) [HELP](#)

WAN Setup
L2TP/IPsec server
IPsec

LAN Setup
LAN configuration
Firewall/NAT services

Edit LAN group

General
Name:
Description:
Managed by:

PPP pass-through
Pass to: ☒ Nowhere
☐ Connection pool
☐ Specific connection
Connection:
Status: ☒ N/A

IP configuration
Address type:
Route to: ☐ Nowhere
☒ Connection pool
☐ Specific connection
Default routing
Connection:
Hostname:
Domain:

DHCP address
IP address / prefix length:
N/A
Obtained:
Expires:

Static address
IP address / prefix length:
 /
E.g.: 192.168.1.13 / 22
2001:cdba:9abc:5678:: / 64
DHCP provider: ☐ None
☒ DHCP server
Start IP address:
End IP address:
Lease time:
DNS servers: ☐ Default
☒ Custom
1:
2:
☐ DHCP relay
Server IP address:
Relay via:

DHCPv6: ☒ None
☐ Stateful
☐ Stateless

IPv6 prefixes:
fda9:e2c:b:2512:: / 64
2a01:4b00:8003:a00:: / 64

IPv6 addresses:
fe80::202:61ff:feba:d05c
fda9:e2c:b:2512:0:202:61ff:feba:d05c
2a01:4b00:8003:a00:202:61ff:feba:d05c

[Apply](#) [Reset](#)

ESx000-02_10_05_06 © 2000-2018 Tilgin. All rights reserved. Copyright and Trademark.

Image 18. DNS section of LAN configuration

UPnP router configuration

To configure your router using LAN UPnP applications, please log into your router (page 2) and navigate to **Advanced > Connection settings > UPnP**. See Image 19. If you're not using UPnP applications, UPnP should be set to Off (the default UPnP setting is Off).

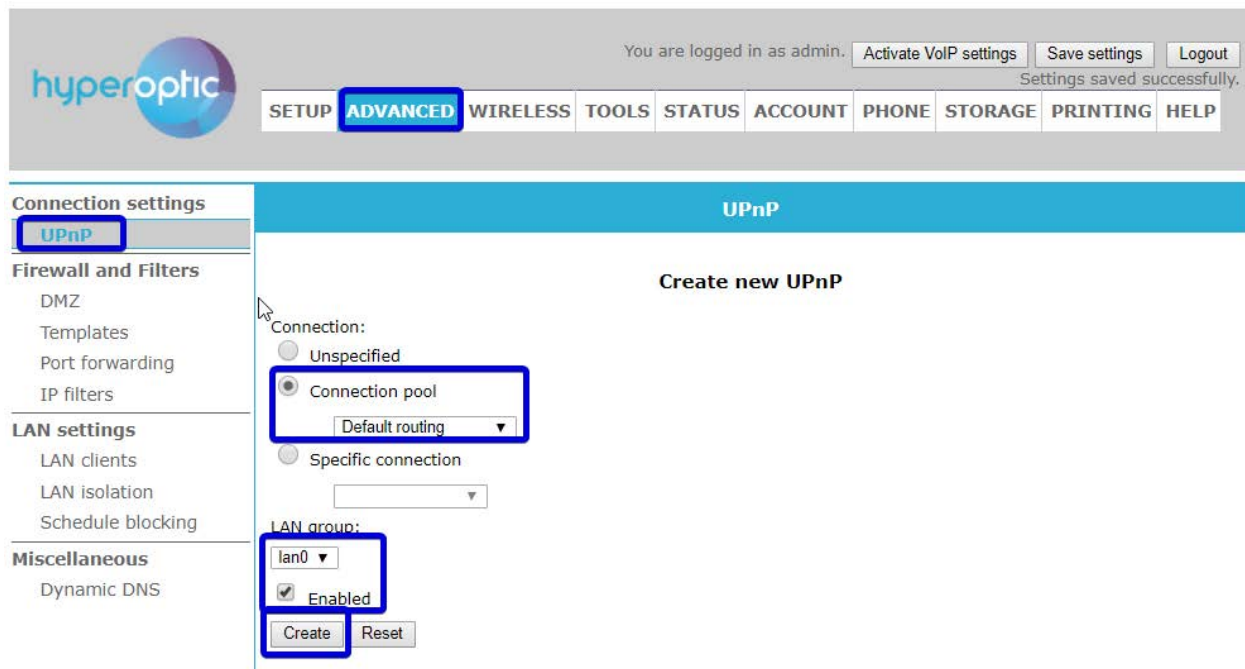


Image 19. Setting up UPnP service

Tick **Enabled** and click **Create**. Once this is done, click **Save settings** in the upper right side of the screen. Confirmation of configuration should appear as shown in Image 20.

Existing UPnP


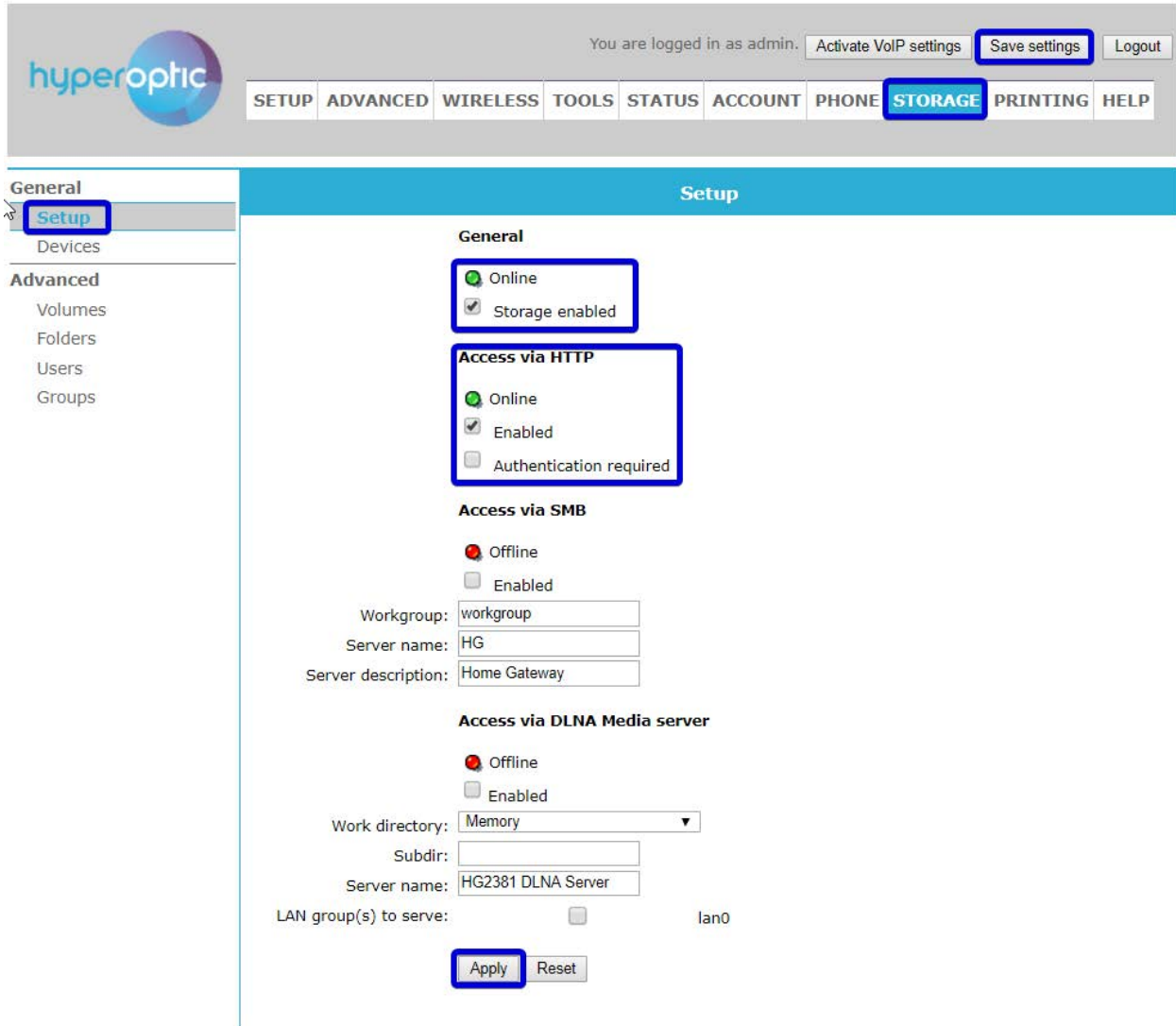
<u>Status</u>	<u>Enabled</u>	<u>Connection</u>	<u>LAN group</u>	<u>Delete</u>
 Active	<input checked="" type="checkbox"/>	Pool: Default routing	lan0	<input type="checkbox"/>
<input type="button" value="Apply"/> <input type="button" value="Reset"/>				

Image 20. Confirmation of UPnP settings

USB storage

You can access the USB storage port on your router in a few ways. To access via HTTP protocol, please log into your router (page 2) and navigate to **Storage > General > Setup**. Click **Storage enabled** and **Enabled** under **Access via HTTP**. Click **Apply** and **Save settings**.

To connect to flash drive type `http://ip_address/nas` into the browser. Router configuration is shown in Image 21. Remote access is shown in Image 22. Your router's USB port with attached flash drive can be used as additional storage, linked with LAN.



hyperoptic

You are logged in as admin. [Activate VoIP settings](#) [Save settings](#) [Logout](#)

[SETUP](#) [ADVANCED](#) [WIRELESS](#) [TOOLS](#) [STATUS](#) [ACCOUNT](#) [PHONE](#) [STORAGE](#) [PRINTING](#) [HELP](#)

General

[Setup](#)

Devices

Advanced

Volumes

Folders

Users

Groups

Setup

General

☒ Online

☒ Storage enabled

Access via HTTP

☒ Online

☒ Enabled

☐ Authentication required

Access via SMB

☒ Offline

☐ Enabled

Workgroup:

Server name:

Server description:

Access via DLNA Media server

☒ Offline

☐ Enabled

Work directory:

Subdir:

Server name:

LAN group(s) to serve: ☐ lan0

[Apply](#) [Reset](#)

Image 21. Flash drive access via HTTP

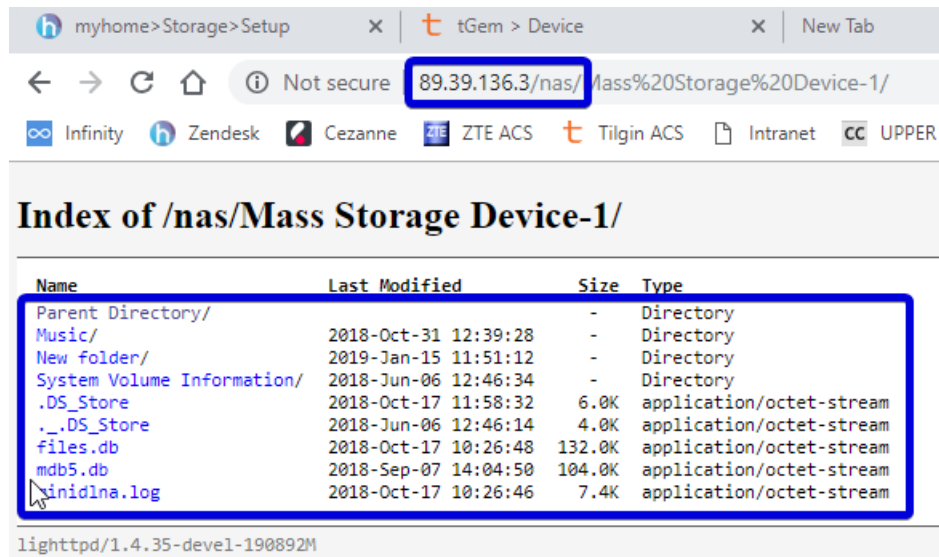


Image 22. Remote access to USB drive via http

To connect via SMB, click **Enabled** in the section **Access via SMB**. See Image 23. Once enabled, click **Apply** and **Save settings**. See Image 24 for SMB access.

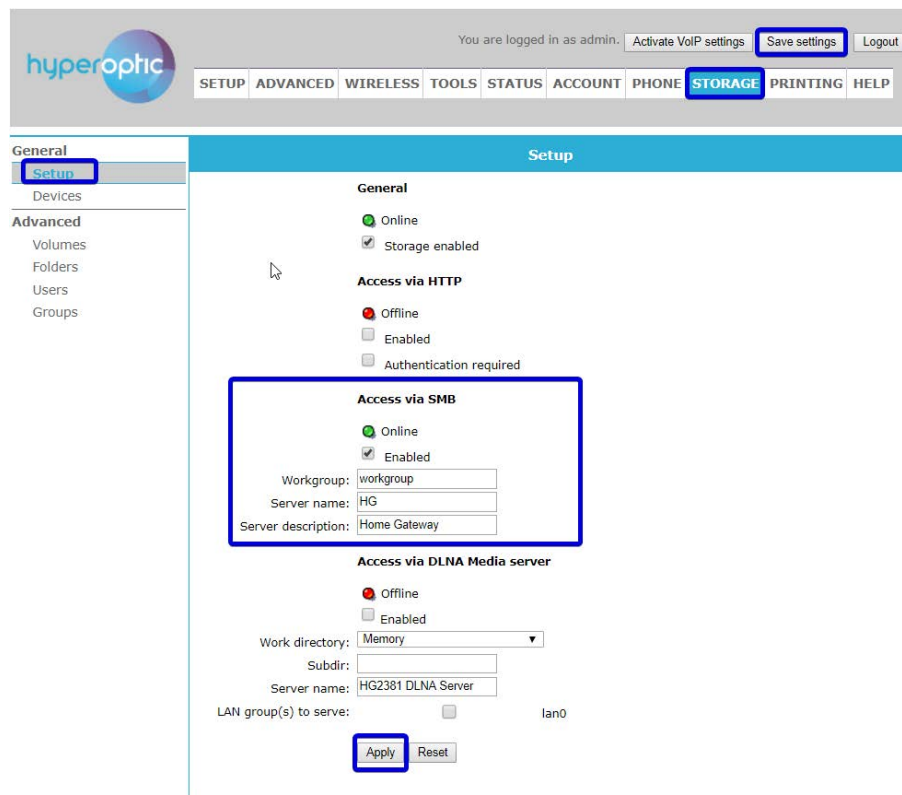


Image 23. Access to flash drive via SMB

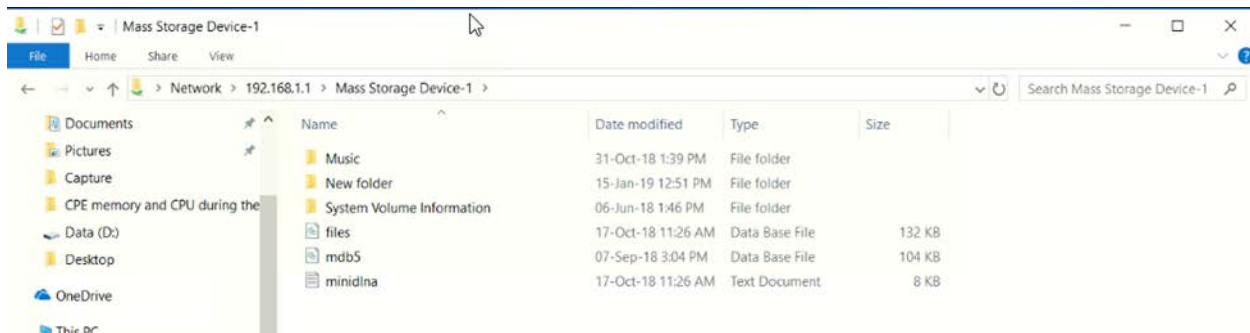


Image 24. LAN access via SMB (type \\192.168.1.1 in browser search)

See Image 25 for access via DLNA Media server. Click to serve **lan0** group. Click **Enabled** and then **Apply**.

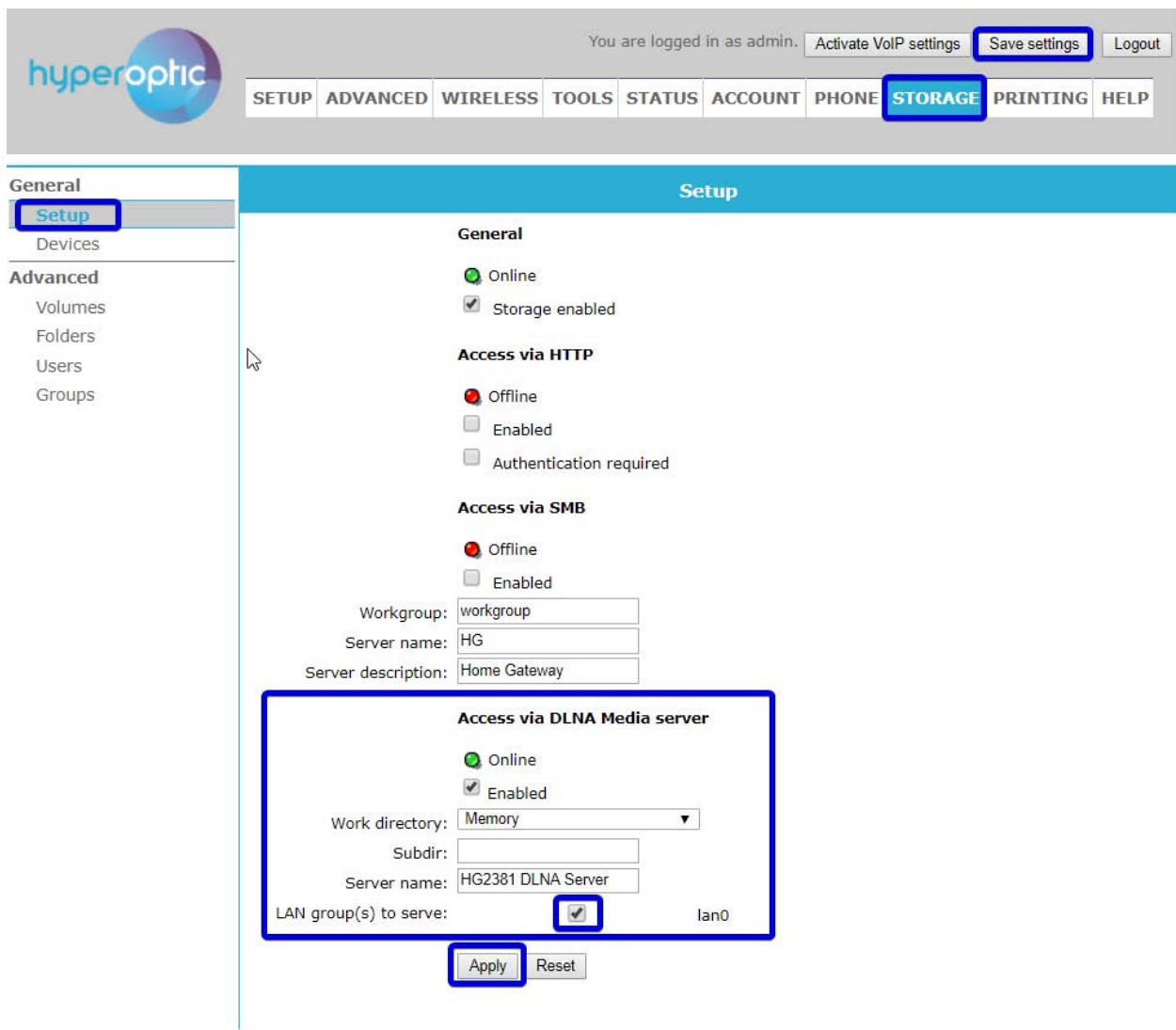


Image 25. Access to DLNA Media server

See Image 26 for access to flash drive via PC application e.g. VLC, Windows Media Player.

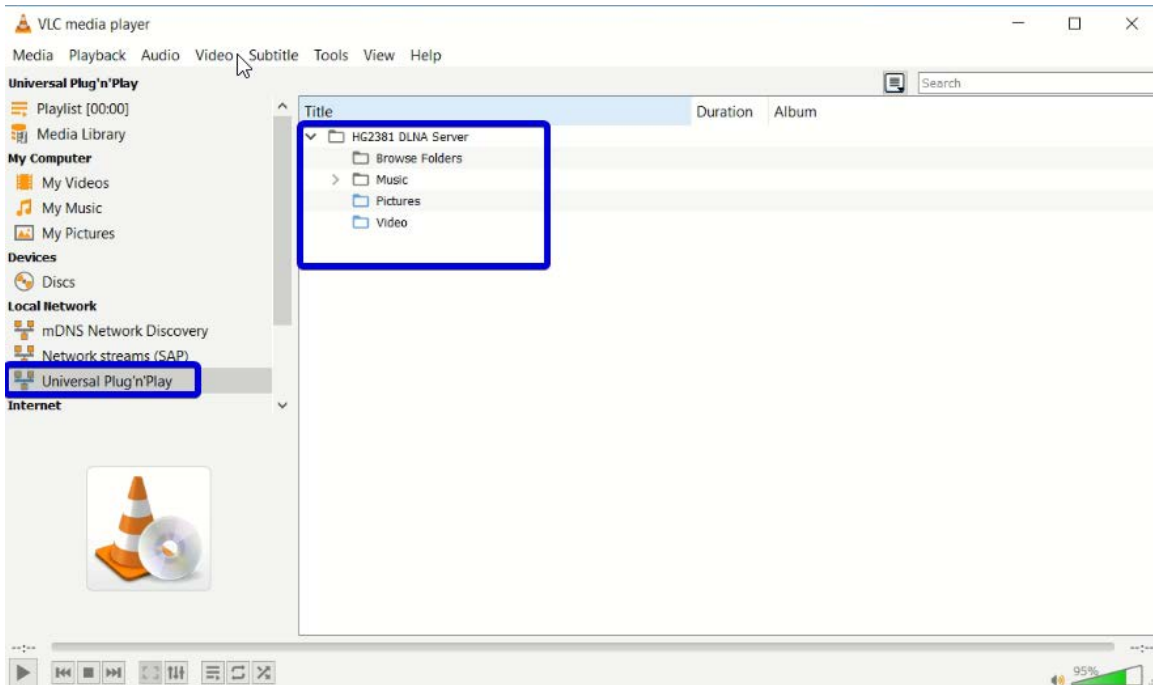


Image 26. Access to USB flash drive DLNA server