

ZTE H3600 Detailed User Guide



Contents

WebGUI Login Page	
Change of DNS (admin account)	
UPnP router configuration (admin account)	5
Parental control (admin account)	6
LAN Clients Status (admin account)	7
Wi-Fi password and SSID change (admin account)	8
Adding new SSID (admin account)	10
Wi-Fi Channel change (admin account)	12
WPS connection (admin account)	14
Change of admin credentials (admin account)	14
USB Storage (admin account)	15
Reboot and factory reset (admin account)	18
Port forwarding (admin account)	19
DMZ (admin account)	20
IPv6 Filters (admin account)	21
DHCP Binding (admin account)	22
DDNS (admin account)	24



WebGUI Login Page

To access the router and configure it open web browser such as Google Chrome, Microsoft Edge, Mozilla Firefox, Opera or any similar application. Type 192.168.1.1 in the address bar of the browser. Login photo illustrates window that will appear on screen. For Username type admin, for Password type password listed on the back of the router. Once all fields are populated, press Login.

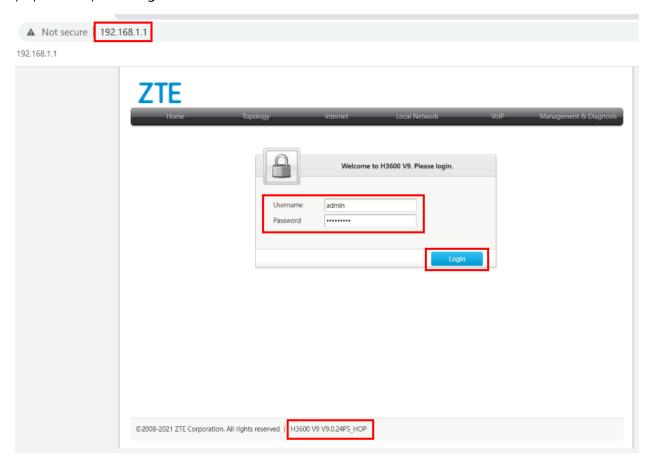


Image 1. - Router H3600 Login Page

Useful information is a software version on the bottom of the page for easy verification.



Change of DNS (admin account)

User can change DNS properties for local LAN clients. To configure change, navigate to section Home > LAN Devices. Click on LAN Settings. This is illustrated in image. By default, router uses two Hyperoptic DNS servers which provide redundancy and address resolution mechanism. These servers communicate directly with WAN ethernet router port and provide means for swift browsing.

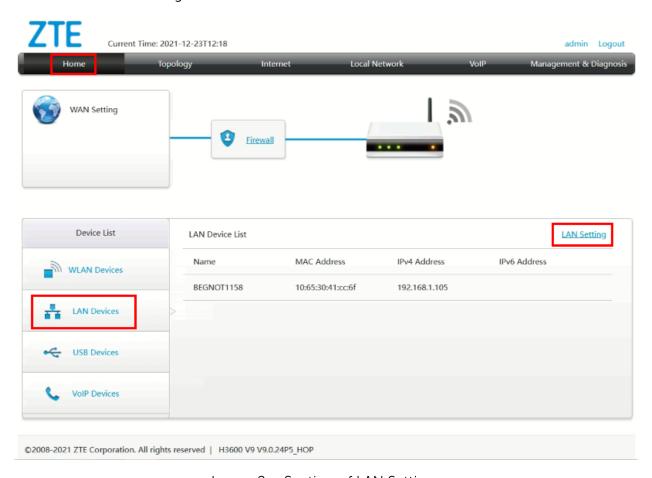


Image 2. - Section of LAN Settings

Window as described in the following image should appear. Click on DHCP Server section. Edit Primary DNS and/or Secondary DNS. In image 2, DNS server with IPv4 address 8.8.8.8 is used. Once configuration change is made click Apply to save settings.



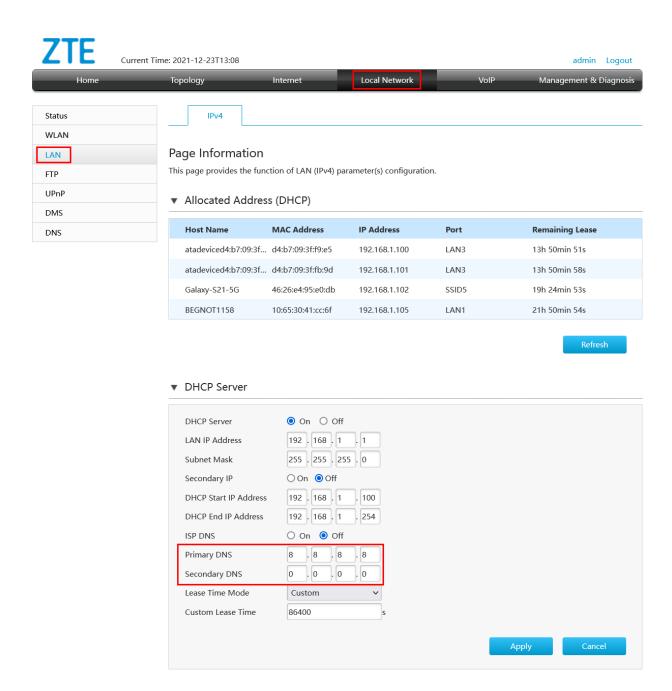


Image 3. - DNS change section of router configuration



UPnP router configuration (admin account)

Configuration of the router can be done via UPnP LAN client application. To enable this service, navigate to Local Network > UPnP. Click On to activate UPnP service. Click Apply. In example described in image, UPnP is used to configure port forwarding. UPnP service can be used for easier and more convenient router configuration. PortMapper Windows application is one example of such app. If no UPnP application is used, UPnP should be set to Off. Default UPnP setting is Off.

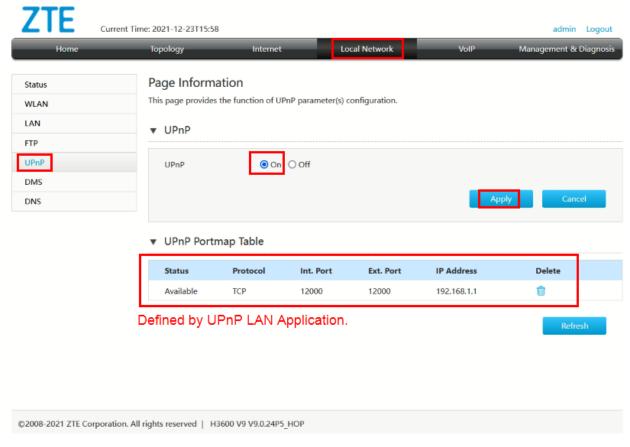


Image 4. Enabling UPnP



Parental control (admin account)

To block access to certain sites with certain content parental control feature can be used. This feature can block LAN client access to sensitive data on web. Restricted access to sites can be achieved using this feature. Please navigate to Internet > Parental Controls. Click on Parental Controls section. Use arbitrary name for the parental control rule. List MAC address of LAN client is in the section User Identity. Check relevant time/date configuration. Sites can be blocked using a keyword or using a URL of a site. Example of blocking configuration is described in image 5. Content listed in blacklist will be blocked. After configuring all parameters click Apply. Important notice: In order for filter URL to become active make sure to reboot the router and to clear cache on a Browser.

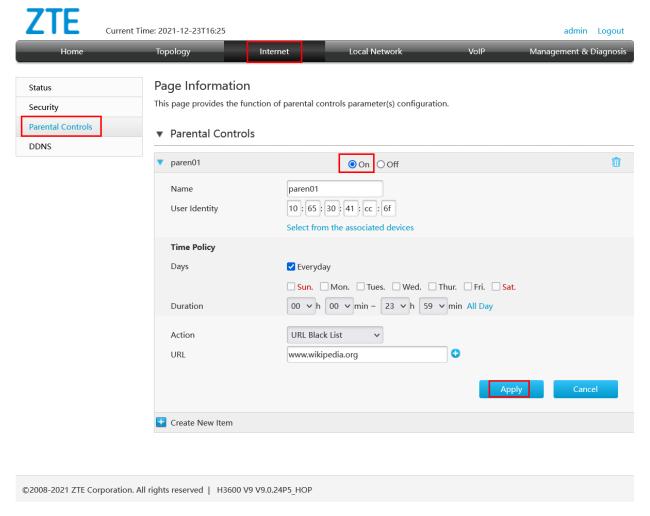


Image 5. Example of URL blocking to Wikipedia.org



LAN Clients Status (admin account)

Number of LAN clients can be checked via router UI. To check leased IPv4 addresses and to check which clients are connected via ethernet or via Wi-Fi, navigate to section **Local Network** > **Status** > **WLAN Client Status** and **LAN Client Status**. This is described in image 6. By checking this section of router web UI, all connected devices can be seen – all devices that use router's Wi-Fi and Ethernet network.

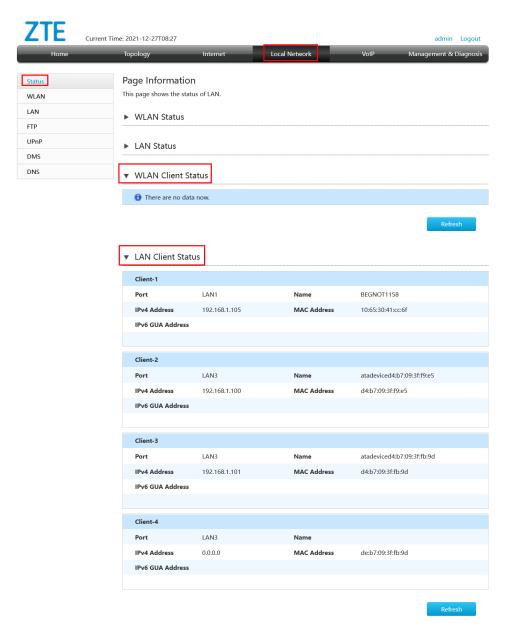


Image 6. – LAN/WLAN Client Status



Wi-Fi password and SSID change (admin account)

To change SSID (name of Wi-Fi network) and/or Wi-Fi password navigate to section Local Network > WLAN > WLAN Basic > WLAN SSID Configuration. Window should be like one described in image 7. SSID name and WPA Passphrase can be user defined. After defining parameters click Apply.

In order to allow band steering mechanism on a device it is highly recommended to set the same SSID and password for both 2.4GHz and 5GHz SSID.

Band steering – Capability of a device to automatically connect device to a appropriate SSID thus, enhancing spectrum efficiency. Example, if old device is being used, it will be connected to 2.4GHz in order to allow modern devices to be connected to 5GHz allowing more bandwidth. Band steering is always enabled on a device and can't be disabled. It will be active once SSID and Password is matching for 2.4GHz and 5GHz radio bands.

By default, WPA2/WPA3 is set and this is the best setup which will also allow connection of new devices which are supporting latest WPA3 security mechanism.

WPA3 – It uses same setup as WPA2 (passphrase) but will use more secured mechanism to manage passwords. It is recommended to use WPA3 on a device as long as it supports it.

It is not recommended to use old WPA security when doing manual setup as it is a security compromised authentication.



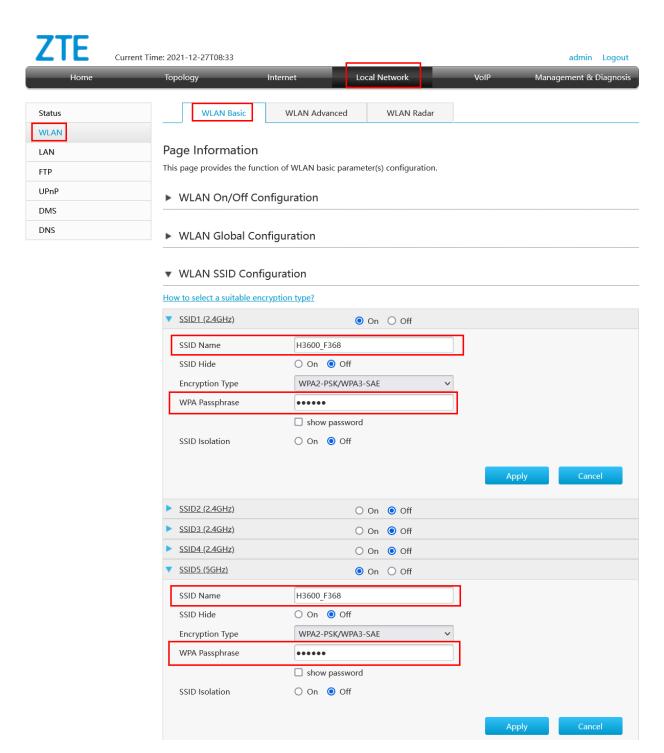


Image 7. - WLAN SSID/Password configuration



Adding new SSID (admin account)

To create new SSID navigate to section Local Network > WLAN > WLAN SSID Configuration. Creating a SSID is simple, just enable it by clicking On button in line with SSID that needs to be enabled. In image 8, it's illustrated how to create new 2.4GHz SSID and 5GHz SSID. New created SSIDs will be visible in home environment, if they are enabled.

Again, same rule as in previous chapter is recommended: Use same SSID name and Password for both bands to allow band steering.



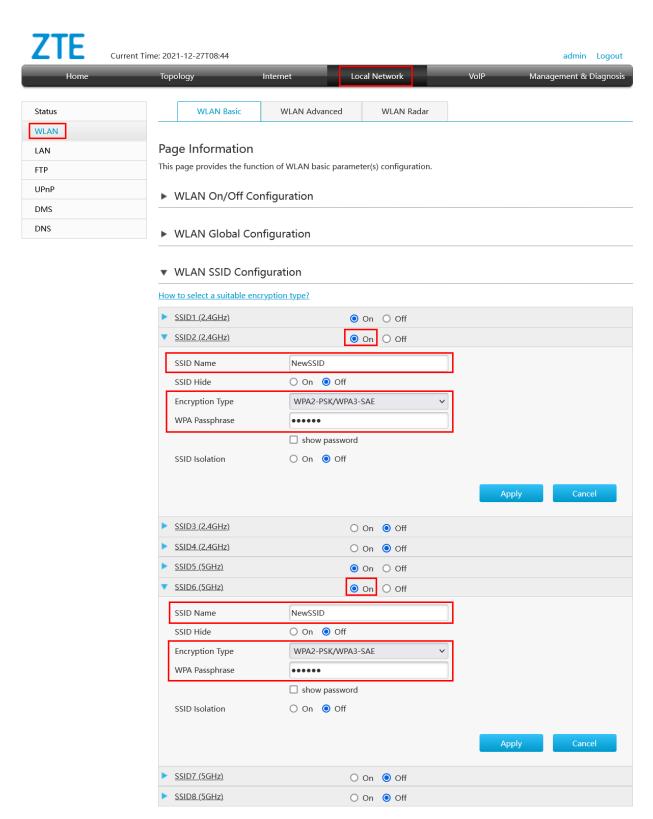


Image 8. - Adding new SSID/Password



Wi-Fi Channel change (admin account)

It is highly recommended to leave automatic channel selection, so level of interference can be decreased. In other cases, please check following procedure.

To change operating channel of Wi-Fi networks, navigate to section Local Network > WLAN > WLAN Basic > WLAN Global Configuration. Expand properties by clicking on the blue rectangle near the 2.4GHz and 5GHz frequency bands. For 2.4GHz network select Channel Range of United Kingdom(CH1-11) and select Channel of choice. This is illustrated in image 9. At the end click Apply to save settings.

Device has a pre-defined channel range 1-11 to avoid that US market devices such as iPhones have problems with connection.

Always choose ax standard mode as it will be used by default if connected device is supporting it.

802.11ax (WiFi6) – Latest standard issued by IEEE and certified by WiFi Alliance. It allows better management of locally connected clients and also a slightly better speeds. It will not allow better WiFi coverage.

Airtime Fairness – This will allow router to automatically put on hold all devices that doesn't use WiFi, but are connected, thus allowing active devices to have more bandwidth over WiFi. It is disconnected by default and can be used independently of channel setting. Usage of airtime fairness doesn't always provide benefits, so it is recommended that customer try with AF or without and find the best setup.



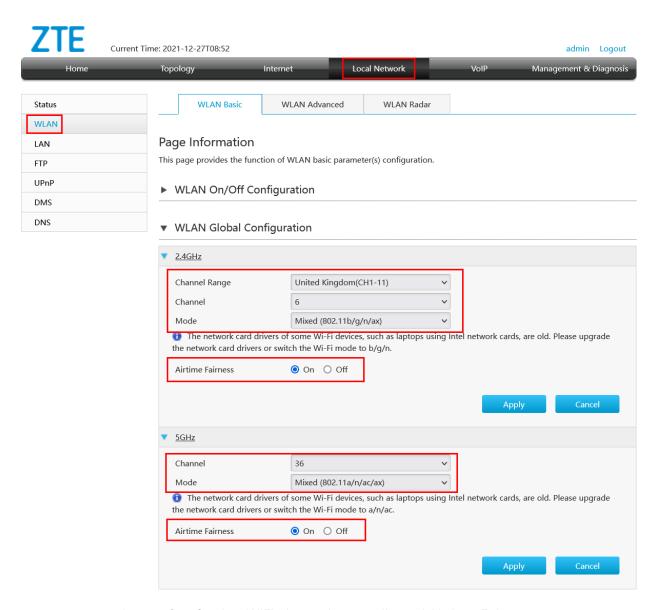


Image 9. - Setting WiFi channel manually and Airtime Fairness



WPS connection (admin account)

LAN clients can connect to Wi-Fi network automatically without a need to input of a password. To do so, press physical WPS button on router, until LED light indicates that WPS is active. WPS LED will start to blink and WPS on a router will be active for 1 min. During this time user can activate Push Button WPS on a PC/Phone and device will be connected automatically.

This type of connection is not recommended as it is very easy to allow malicious attacker to connect to user's WiFi and network.

Change of admin credentials (admin account)

User can change login password under the section Management & Diagnostics > Account Management > User Account Management. This is described in image 10. Old password can be found on router itself. After configuring new password click Apply to save settings.

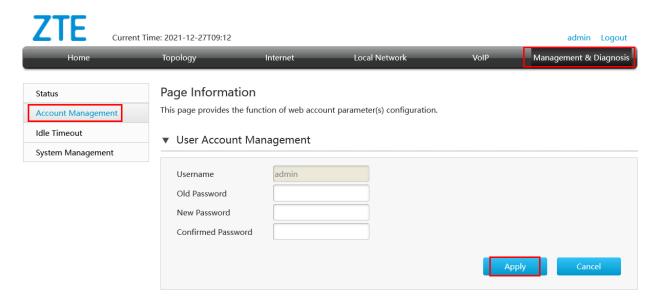


Image 10. - Setting Admin Account Credentials



USB Storage (admin account)

Access to USB flash storage can be performed from LAN client. To grant access to USB flash, navigate to Local Network > FTP. Enable FTP server by clicking On button. Once turned on, configure FTP username and FTP password. Example is described in image 11. Once all configured, click Apply to save settings. Router's USB port with attached flash drive can be used as additional storage area linked with LAN network.

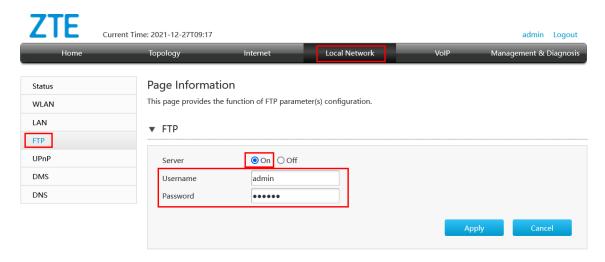


Image 11. - FTP Server setup

After (or before, doesn't make a difference) FTP server is enabled, USB Flash can be plugged in. Local Network > Status > USB Status menu will display current status of USB Flash.

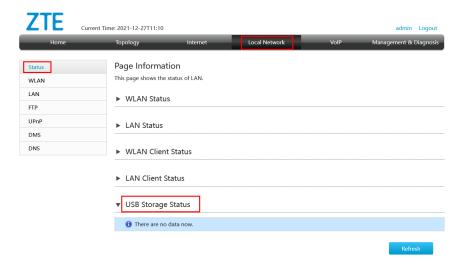


Image 12. - USB Status



Content of the USB can be accessed by using FTP client on a PC/Phone. There are numerous free FTP clients on the Internet. Filezilla client is mostly used and is free.

FTP Client setup: URL: ftp://192.168.1.1, username and password are the same as for FTP server, port: 21.

Remote FTP access to USB flash drive requires advanced router configuration and it can be done per request.

Access to USB flash drive from LAN can be achieved via Digital Media Server feature. Enabling this feature on router is described in image 13. Navigate to Local Network > DMS. Click On and Apply settings. LAN applications that support DMS will enable access to USB drive. Example of such application is VLC player, Windows Media Player.

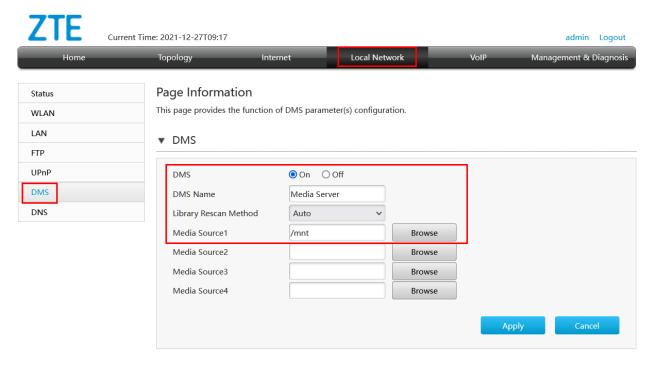


Image 13. - DMS Setup



Access to USB flash drive from PC application is displayed in image 14.

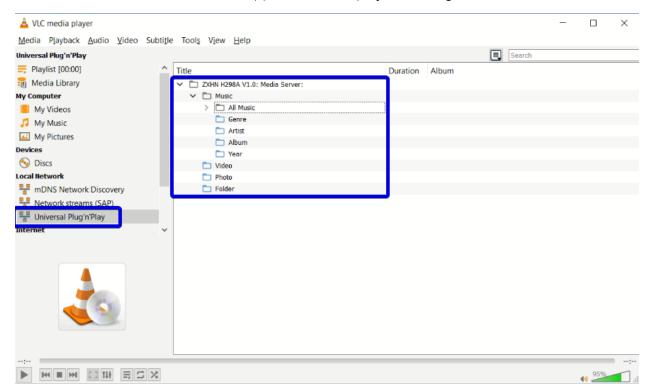


Image 14. - Access to USB flash drive from PC application



Reboot and factory reset (admin account)

Reboot and Factory reset can be performed at section **Management & Diagnostic > System Management** > **Device Management**. Reboot and Factory Reset buttons are presented in image 15. If you experience significant problems with your connection, please try rebooting your router. Just turn it off and off.

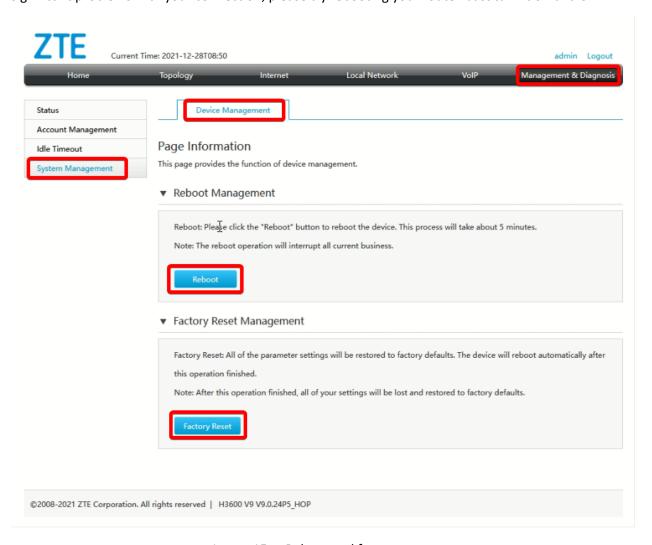


Image 15. – Reboot and factory reset

Please avoid using factory reset often as it can shorten life of a router. Factory reset will delete all user configured parameters on the router.



Port forwarding (admin account)

To set port forwarding navigate to section **Internet > Security > Port Forwarding**. In the **Name** field use arbitrary value that will describe service you are going to configure. Set **Protocol** to TCP or UDP, based on type of service which you are trying to configure. TCP is selected by default. In the **LAN Host** field put IPv4 address of LAN client which hosts the server. In the **WAN Port** fields specify range of WAN router interface ports what will be opened (in the example bellow, only one port TCP 12001). In the **LAN Host Port** fields specify ports on which LAN client is listening for incoming IPv4 traffic. Once everything is set, click on **On** button to activate the rule and then click **Apply** button to save the rule. This is illustrated in image 16.

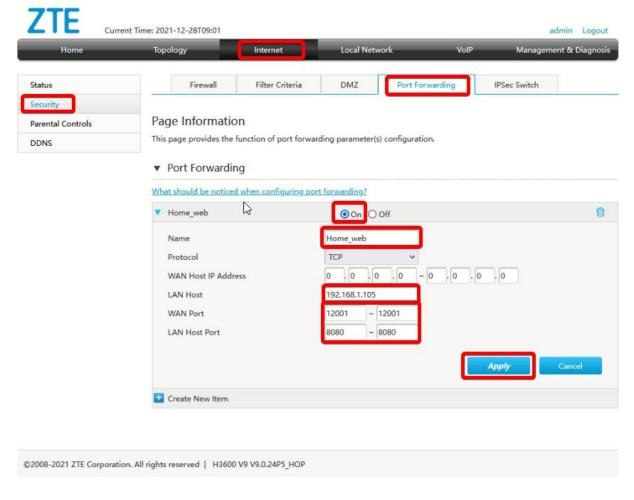


Image 16. Port forwarding rule



Optional steps:

- You can configure WAN Host IP Address fields to specify only certain IPv4 addresses which are allowed to use your service. Addresses in these fields reside on the Internet and are public IPv4 addresses.
- 2) WAN port and LAN Host Port fields can all contain a single port. In that case router does not modify TCP packet fields.

DMZ (admin account)

To put some LAN client in *demilitarized zone* navigate to section **Internet > Security > DMZ**. Specify LAN client IPv4 address in **LAN Host** field. Click **On** button and click **Apply** to save. **Placing LAN devices in DMZ can pose an IT security risk and this action should be taken with caution!** Process is illustrated in image 17.

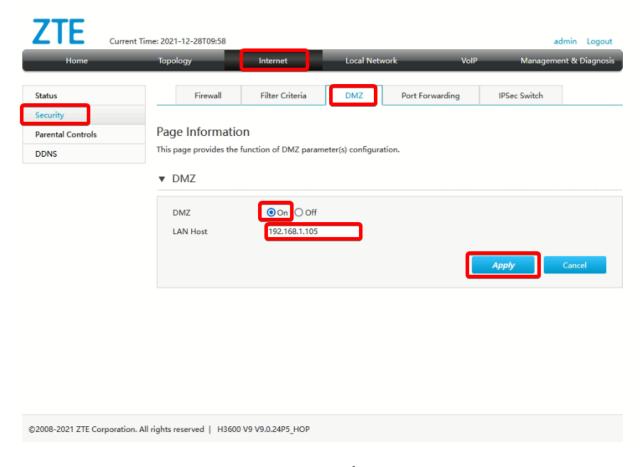


Image 17. DMZ configuration



IPv6 Filters (admin account)

If IPv6 servers are available at LAN device, access to them can be granted via IPv6 filters. To configure IPv6 filters, navigate to Internet > Security > Filter Criteria > IP Filter. This is illustrated in Image 18. Click on IP Filter line.

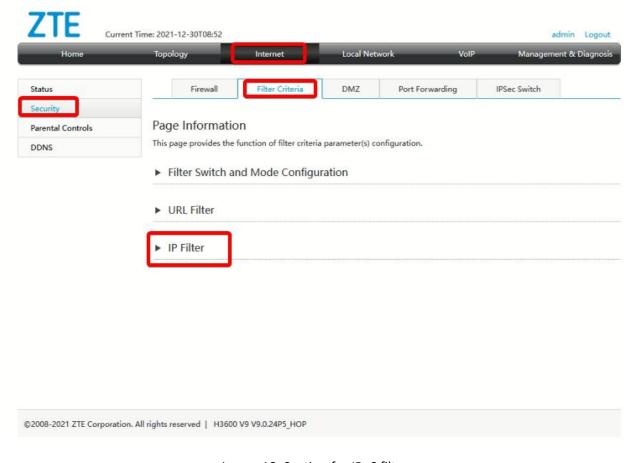


Image 18. Section for IPv6 filters

In the Name filed use any description for the IPv6 rule. Click Accept in the Target line. Select IPv6 from the IP Version dropdown menu. For the Destination IP use IPv6 address of the LAN client/server. Select TCP as Protocol in most cases, depending on the type of service you want to configure. In the fields Destination Port Range use range of ports on which LAN client is listening for incoming connections. For Ingress select WAN-DHCP-CONNECTON. For Egress select LAN. Turn the rule On and click Apply to save settings. This is illustrated in image 19.



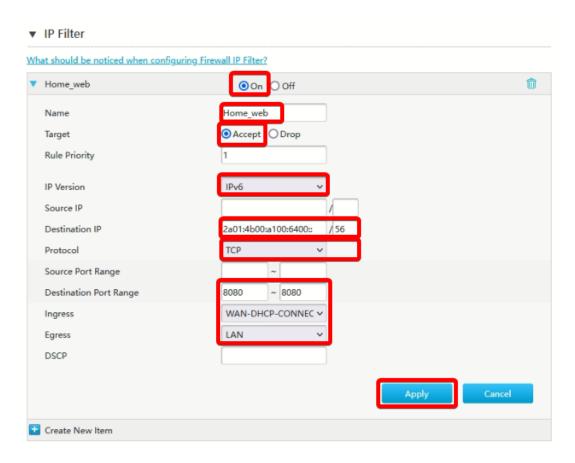


Image 19. Configuration of IPv6 filter rule

DHCP Binding (admin account)

Specific LAN client can have same IPv4 address all the time. To define which LAN client will have which IPv4 address, configuration of binding must be completed. Navigate to section **Local Network > LAN > DHCP Binding**. This is illustrated in image 20. In the **Name** field use any description for the configuration rule. In the **MAC Address** field specify MAC address of LAN client. In the **IP Address** field specify IPv4 address from the range 192.168.1.2 to 192.168.1.254. Click **Apply** to save settings. Reboot the router or LAN client for changes to be implemented.



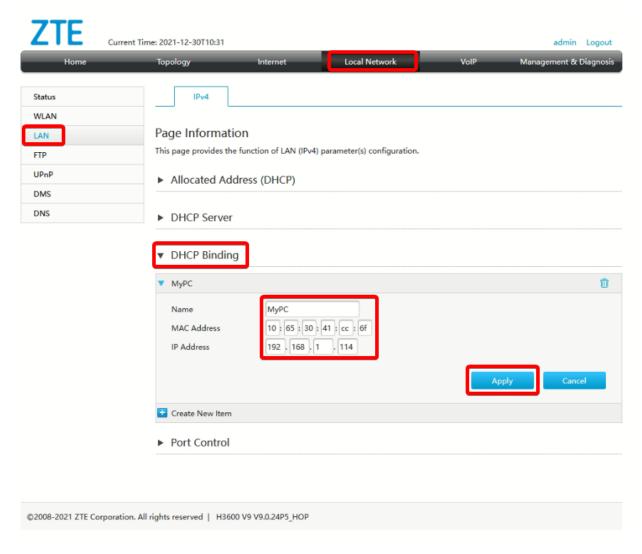


Image 20. DHCP binding in LAN network



DDNS (admin account)

DDNS can be used to associate some specific fully qualified domain name (FQDN) to public IPv4 address which is present on WAN router interface. By configuring this feature, router can be reached via "descriptive" name, rather than via its IPv4 address. To configure this feature, navigate to section Internet > DDNS.

Before setting parameters on the router, user must register it's FQDN with some DNS provider (e.g. https://now-dns.com/). After completing this step, chose appropriate **Provider** from dropdown menu, as it is illustrated in image 21. Turn DDNS **On** and specify **Username** and **Password** used in registration process. Set registered "descriptive" name in the **Host Name** field.

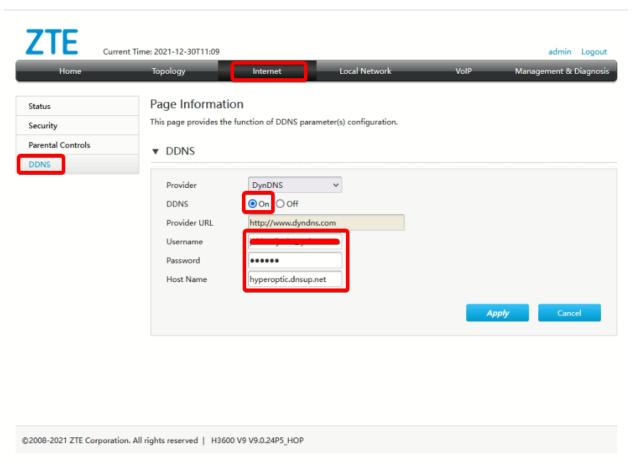


Image 21. Configuration of DDNS