TJ2100N-14ET User Manual

Document ID: 142-DOC000205-E | Release: Pre Release Draft | Version: 0.4

TEJAS® NETWORKS

www.tejasnetworks.com

Warning and Disclaimer

While every effort has been made to make this document as complete and as accurate as possible, Tejas Networks does not accept any responsibility for poorly designed or malfunctioning networks. The information provided in this document is on an "as is" basis and is subject to change without prior notice. The author, Tejas Networks, shall have neither liability nor responsibility to any person or entity with respect to any loss or damage arising from the information contained in this document or from the use of equipment or software that might accompany it. The opinions expressed in this document are not necessarily those of Tejas Networks.

Trademark Acknowledgments

All terms mentioned in this book that are known trademarks or service marks have been appropriately capitalized. All trademarks duly acknowledged. Tejas Networks cannot attest to the accuracy of third-party information. Use of a term in this document should not be regarded as affecting the validity of any trademark or service mark.

Technical Support Information

Tejas customers can contact Tejas Support Center (TSC) 24x7x365 for any assistance through helpline, fax or email.

- Phone(s): +91 80 41719090, +91 80 26591082, +91 80 26591080
- Fax: +91 80 26591079
- Email: support@india.tejasnetworks.com
- Skype: tscsupport123
- Web: www.tejasnetworks.com

Additional Learning Resources

The help content for all our products including this content is available online at https://tejdocs.india.tejasnetworks.com/. Please contact our Sales team to get access to this content or to organize any onsite and/or offsite trainings related to our products or technologies.

Feedback

Your opinion is of great value and will help us improve the quality of our documentation and related learning resources. Drop a note to docs@tejasnetworks.com and let us know how we can assist you in your learning.

Revision History

Version	Date	Modifications Made
0.4	08-January-2020	Pre Release Draft

Table of Contents

Overview

This section describes who must read this guide, how it is organized, and what conventions are used in the document.

Scope

This document introduces and orients service providers to system overview, and the user interface configuration of the product.

Who This Guide Is For

This document is intended for operators, engineers and service providers who use the user interface of products to provide support services to the ONTs.

Safety first

To prevent personal injury, equipment damage, and service interruptions, you must follow all precautionary messages given in the document in addition to all the local safety standards required by your company. The following symbols used in the document at various places represent important situations.

Table 1: Safety Sign Conventions

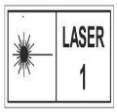
Symbols	Meaning	Represents
	Caution	Situations that could result in equipment damage or loss of data.
	Danger	Situation that could cause physical injury. Failure to observe this precaution may result in personal injury, death, or equipment damage.
	Hot Surface	Situation that could result in personal physical injury including burns.
	Optical Safety	Staring directly into the optical connector output beam may cause irreparable damage to your eyes. It could even lead to loss of eye sight.
	Electric Shock Risk	Observe this precaution to prevent personal injury, or death. This can cause equipment damage.
	Static Discharge Warning	Handle the equipment wearing an anti-static ESD wrist strap properly grounded to discharge the static buildup. Failure to observe this precaution may result in equipment damage.

Table 2: Environmental Regulatory Conventions

Symbols	Meaning	Represents
	European Conformity	Abbreviation of original French words Conformité Européenne which translates to European Conformity. CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation.
	China RoHS	China RoHS chasing arrow symbol with a "50" indicating that hazardous material is not released into the environment until 50 years after the date of manufacture.

Symbols	Meaning	Represents
	China RoHS	China RoHS chasing arrow symbol with a "10" indicating that hazardous material is not released into the environment until 10 years after the date of manufacture.
	WEEE	The WEEE- Waste of electrical and electronic equipment - under Article 11(2) of the WEEE Directive. It is also prescribed by European standard EN50419:2005. This symbol indicates the need for separate collection for products.

Table 3: Power Unit safety conventions

Symbols	Meaning	Represents
	Danger	Do not jack-in/jack-out PSU/PFU card in the system with PowerCable connected. PSU/PFU has high energy and/or voltage level that can cause serious electrocution or burn.
	Caution	When removing a card, the unit should not be replaced into the system for at least 5 seconds to ensure that unit capacitors have discharged.
	Static Discharge Warning	Static charge can damage the equipment. While handling cards for making system interconnections, wear an ESD strap to discharge the static buildup.
	Hot Surface	Do not touch the heat sinks on the unit just after removal.

Chapter Organization

This document is organized as follows:

Chapter	Scope
Introduction on page 11	This chapter introduces the TJ2100N-14ET with details of system overview and system features.
Hardware Architecture on page 17	This chapter details the hardware details of TJ2100N-14ET including the LED indications.
User Interface Configuration on page 19	This chapter details the basic user interface configuration and configuring PPPoE, WiFi, IPTV and Phone.

Introduction

TJ2100N-14ET is an ONT (Optical Network Terminal) placed at the customer premises of GPON network. The functionality is to provide broadband connectivity to the residential user using GPON technology.

System Overview

TJ2100N-14ET system is an access node in FTTH architecture of GPON system. The system is a single card system and is designed to serve a single residential unit.

ONT operates in Non-AC conditions and is powered by 12V power adaptor. AC-DC adaptor is provided to support working with 90-270V, 50Hz, AC supply. ONT can be installed on table top and wall mounted enclosure suitable for indoor environments.

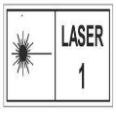
 **CAUTION:** If the ONT is used in restricted access area, only authorized person

On one side it has fiber (GPON) interface and on other side it has user interfaces with upto 4 LAN ports with RJ-45 interface supporting 10/100/1000 BaseT, 1 USB, 2x2 MIMO Wi-Fi (IEEE 802.11 a/b/g/n/ac) , and 2 POTS interfaces.

Interfaces

It has the following interfaces:

- 1 G-PON port
- 4 x 10/100/1000BaseT interfaces
- 2 POTS/FXS interfaces
- 1 USB 3.0- downward compatible to USB 2.0
- Dual band, Dual radio IEEE 802.11 a/b/g/n/ac 2x2 MIMO WiFi.



OPTICAL SAFETY: Do not stare or look directly into the optical connector output beam, as this can cause irreparable damage to your eyes and even loss of eye sight.

Functions and Features

In the upstream direction,

- The TJ2100N-14ET connects with the OLT at the network side through a passive optical network (G-PON) port to provide integrated access service.

In the downstream direction,

- The TJ2100N-14ET connects with LAN switches, PC, STB and so on through Ethernet ports, so as to access data, voice and video services (Triple Play services).
- The TJ2100N-14ET connects to a phone or a fax through POTS ports to provide Voice and FAX services.

The TJ2100N-14ET has the following features:

- Serves as a GPON terminal to support broadband connection.
- Supports GPON access technology, providing up to 2.5 Gbit/s downstream rate and 1.25 Gbit/s upstream rate at the network side.
- Provides 4x10/100/1000 Base-T full-duplex Ethernet ports, allowing all IP related services like Internet, IPTV, VOD and over the top services.
- Provides Voice and FAX services through two POTS ports with the RJ-11connectors.
- USB ports can be used to connect Printers, storage devices or adaptors.
- Supports remote software upgrade from OLT/TR69 or ONT webUI.
- Dying Gasp support for power loss indication.

Precautions

Following are some of precautions listed:

- Do not make direct eye contact with live fiber.
- Make sure that fiber does not have any bend.
- Keep the TJ2100N-14ET out of reach of children.
- Do not place the TJ2100N-14ET in direct sunlight.

System Features

Table 4: Software and Hardware Features

Software Features	Hardware Features
Supports 32 T-CONTs , 64GEM Port-IDs Supports Realtime DBA (mode 0) Advanced L2/3/4 Classifier IGMPv2 support, IPv6 ready Full feature vocoder package: G.711, G.729 A/B, G.726, G.723.1 T.38 fax relay Jitter buffer, echo cancelation 256 entry MAC table 64 entry VLAN table Wire Speed NAPT even in PPPoE mode. Firewall and ACL, prevent MAC address spoofing, limit to the number of MAC/IP addresses per port. 256 multicast groups are supported IEEE 802.3x based flow control Per VLAN based bandwidth management and QoS support 802.1p bridging is supported Piggy-back DBRu report mode 0 is supported Idle-GEM DBA support Concurrent support of Piggy-back DBRu and Idle-GEM DBA TCONT type 1 to TCONT type 4 are supported Bandwidth control per UNI port is available AES support is available TJ2100N-14ET can be configured to accept following types of frames from end users: • Customer VLAN tagged frames • Priority tagged frames	Optical interface • Transmission: GPON : ITU-T G.984 • Line rate: Downstream - 2.5 Gbps, Upstream – 1.25 Gbps • Fiber: Single mode fiber (G.652) • Connector: SC/APC • Wavelength: 1490nm D/S, 1310 nm U/S • Distance: Up to 20/40 km depending upon the split ratio and type of SFP used at OLT. • Link budget: Receive Sensitivity -27 dBm (class B+) and Transmit power 3dBm (Max 5 dBm) LAN interface • Protocol: IEEE 802.3 on 10/100/1000 BaseT Ethernet interfaces. • Connector: RJ-45 Wi-Fi Interfaces • IEEE 802.11 b/g/N/ac with 20/40/80 MHz bandwidth • SSID per radio: 4 • AP isolation: Supported • Max clients: 128 (32 per radio) • Mac restrict mode: Supported • Mac filter based probe response: Supported • No of TX/RX chains: 2 • WMM support: Yes • Preamble: Configurable between short/long • Beacon interval: Configurable • Security: Open, 802.1x, WPA2, WPA2-PSK Voice interface • Protocol : POTS • Connector : RJ-11 Power Rating: 1.5A @ 12V DC Power Consumption: 15Watts • Environmental Compliance: QM333 • Operating Temperature: 0°C to 45°C • Storage Temperature: -25◦C to +70◦C • Operating Humidity: 5%RH to 95%RH, no

Software Features	Hardware Features
• Untagged frames • 802.1p mode RS(255, 239) FEC is supported Table I.1/G.984.1 - Examples of services and UNIs include: • Ethernet and IPTV on RJ-45 based interface (4xGE) • POTS on RJ-11 interface	condensing Dimension Details: • Length = 240mm • Height = 170mm • Depth = 61mm Weight: 450gms (without packing)

Regulatory standard compliance

The list of national and international electromagnetic compatibility, safety, reliability and RoHS standards in this chapter is not exhaustive. The standards listed are generally regarded as the primary applicable standards. The conformity status on additional national and international standards not listed in this section can be provided upon request.

Regulatory standards compliance

Specification	Standard
EMI/EMC	FCC Part-15, Subpart B, Class-A ICES-003, Class-A EN 300386 EN 55022 Class-A / CISPR-22 Class-A EN 55032 Class-A / CISPR-32 Class-A EN 55024 / CISPR-24 (EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN 61000-4-29) EN 61000-3-2, EN 61000-3-3 and EN61000-4-11 (applicable to AC power supply products)
Safety	Certified for CB – Scheme IEC 60950-1 / EN 60950-1 IEC 62368-1 / EN 62368-1 UL 62368-1 UL 60950-1 CAN/CSA-C22.2 No.60950-1 CAN/CSA-C22.2 No.62368-1-14
Laser Safety	IEC 60825-1 / EN 60825-1 IEC 60825-2 / EN 60825-2 21 Code of Federal Regulations (CFR)1040
Environment	ETS 300 019-1-1, Class 1.2 Storage ETS 300 019-1-2, Class 2.3 Transportation ETS 300 019-1-3, Class 3.2 Operating stationary use QM333 – Functional for Environmental testing of Electronic equipment's for Transmission and switching use.
RoHS compliant	Directive 2015/863/EU

FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Hardware Architecture

The following shows the front view of TJ2100N-14ET:

Figure 1: Front Panel- TJ2100N-14ET

Table 5: LED Status Description

LED	NAME	STATUS	DESCRIPTION
	WiFi service	On	WiFi function is enabled.
		Off	WiFi function is disabled.
	Alarm indicator	Off	Default indication.
		Red	Indicates the presence of alarm on the ONT.
		Green	Indicates that there is no alarm on the ONT.
	OLT link indicator	Off	No link is established with OLT.
		On	ONT has successfully established link with OLT.
	Phone (PH-1 and PH-2)	Off	VoIP is not configured or disabled.
		Blinking	Voice port is enabled and it is OFFhook.
		On	Voice port is enabled and it is ONhook.
	WPS Status	Off	WPS authentication is not done.
		On	WPS Authentication is done.
	Internet	Off	WAN connection is not created on ONT.
		On	WAN connection is created on ONT.
	Power	On	ONT is powered on.
		Off	No power supply to ONT.

Following table lists the status and significance of Ethernet LEDs.

Sl No.	LED Status				Description
	ETH-1	ETH-2	ETH-3	ETH-4	
1	Off	Off	Off	Off	Ethernet link is not connected.
2	On	On	On	On	Ethernet link is up.
3	Flashing	Flashing	Flashing	Flashing	Traffic on Ethernet

Following table details the port functionality of TJ2100N-14ET ONT:

Table 6: Ports Description

Symbol	Port	Function
	PON port	SC-APC Connector: To provide one PON access port for the integrated access service.
	VOIP Port 1 and 2 (PH-1/PH-2)	RJ-11: To provide two Voice telephone ports to connect to a phone or a FAX, so as to provide voice and fax services.
	Power Input	Input Requirement: 12V DC, 2A.
	USB	Supports USB3.0 Standard.
	RST Switch	Push Button: To reset ONT or Factory Default.
	WPS Switch	Used to authenticate WiFi access for Guests.
	ETH1 to ETH4	1x4 RJ45 Connector: it is provide 10/100/1000 BaseT interface (UNI).

User Interface Configuration

Following are some of the configurations required:

1. Basic Configuration
2. Configuration of PPPoE account (Internet)
3. Configuration of WiFi Service
4. IPTV service configuration
5. Phone(voice)/FAX service configuration

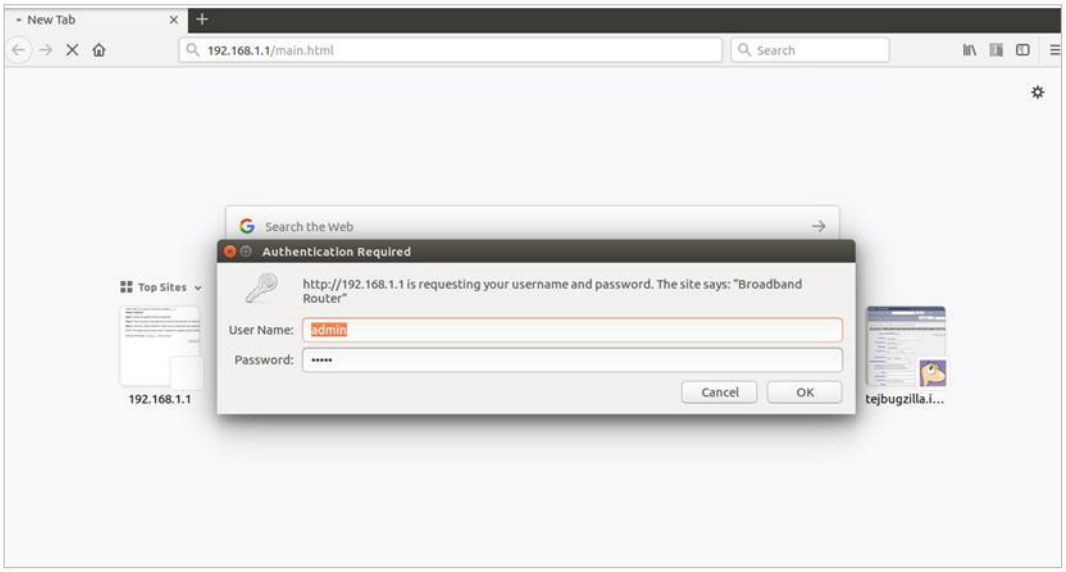
Basic Configuration

To perform the basic configuration,

1. Connect PC or laptop to any Ethernet port.
2. Configure a PC or laptop in DHCP mode and connect it to one of the LAN ports of TJ2100N-14ET so that it gets an IP from the residential gateway.
3. Go to command prompt in connected laptop and check the received IP by typing *ipconfig* in windows and *ifconfig* in Linux. It will receive an IP from class *192.168.1.1.*
4. Open an Internet browser in the connected laptop/PC. Browse the following site: http://192.168.1.1 the gateway config page is displayed.
5. Enter the user name and the password. The default user name is "admin" and its password is "admin".

6. Click **Log In**.

Figure 2: Login page



7. The **Device Status** is displayed. This page shows the current status and some basic settings of the device. This page is also displayed if we navigate to **Status-> Device**.

Figure 3: Configuration page

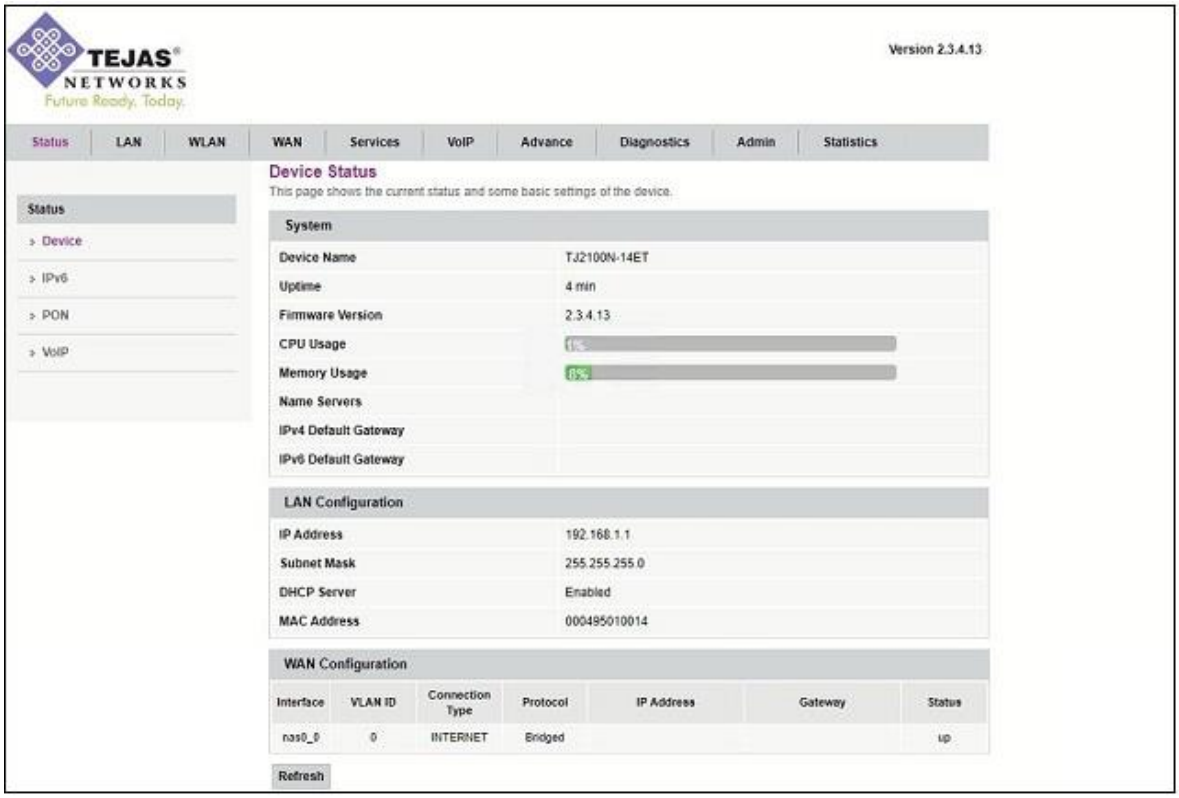


Table 7: Device Status parameters

Parameter	Description
System	
Device Name	Displays the model number of the device (ONT); TJ2100N-14ET.
Uptime	Displays the uptime of ONT.
Firmware Version	Displays the firmware version of the ONT.
CPU Usage	Displays the CPU usage details.
Memory Usage	Displays the memory usage details.
LAN Configuration	
IP Address	Displays the current IP address of the ONT.
Subnet Mask	Displays the current subnet mask.
DHCP Server	Displays the status of DHCP Server as 'Enable' or 'Disable'.
MAC Address	Displays the Mac Address of the ONT.
WAN Configuration	
Interface	Displays the name of the interface.
VLAN ID	Displays the VLAN ID of the traffic assigned for the interface.
Connection Type	Displays the type of connection.
Protocol	Displays the name of the protocol.
IP Address	Displays the IP address of the interface.
Gateway	Displays the IP address of the gateway node.
Status	Displays the status of the interface as 'Up' or 'Down'.

Click on the **Refresh** button to refresh or reload the page.

Status- IPv6

To view the current status of IPv6, select **Device Status-> IPv6** from the navigation menu. **IPv6 Status** page is displayed.

Figure 4: IPv6 Status

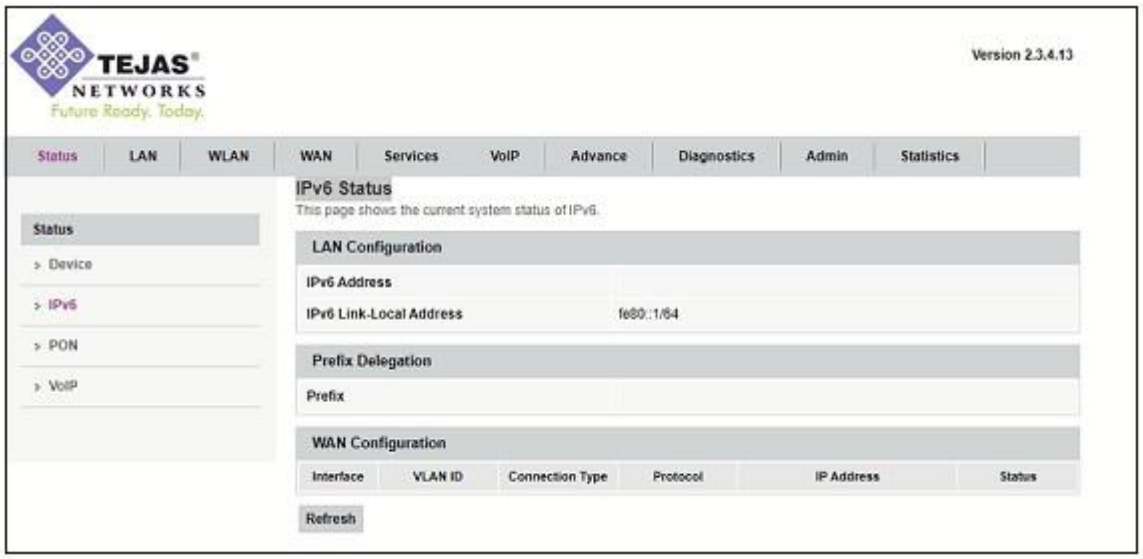


Table 8: IPv6 Status parameters

Parameter	Description
LAN Configuration	
IPv6 Address	Displays the IPv6 address.
IPv6 Link-Local Address	Displays the link-local address, an IPv6 unicast address that can be automatically configured on any interface using the link-local prefix.
Prefix Delegation	
Prefix	Displays the prefix for the address.
WAN Configuration	
Interface	Displays the name of the interface.
VLAN ID	Displays the VLAN ID of the traffic assigned for the interface.
Connection Type	Displays the type of connection.
Protocol	Displays the name of the protocol.
IP Address	Displays the IP address of the interface.
Status	Displays the status of the interface as 'Up' or 'Down'.

Click on the **Refresh** button to refresh or reload the page.

Status- PON

To view the current status of PON, select **Device Status-> PON** from the navigation menu. **PON Status** page is displayed.

Figure 5: PON Status

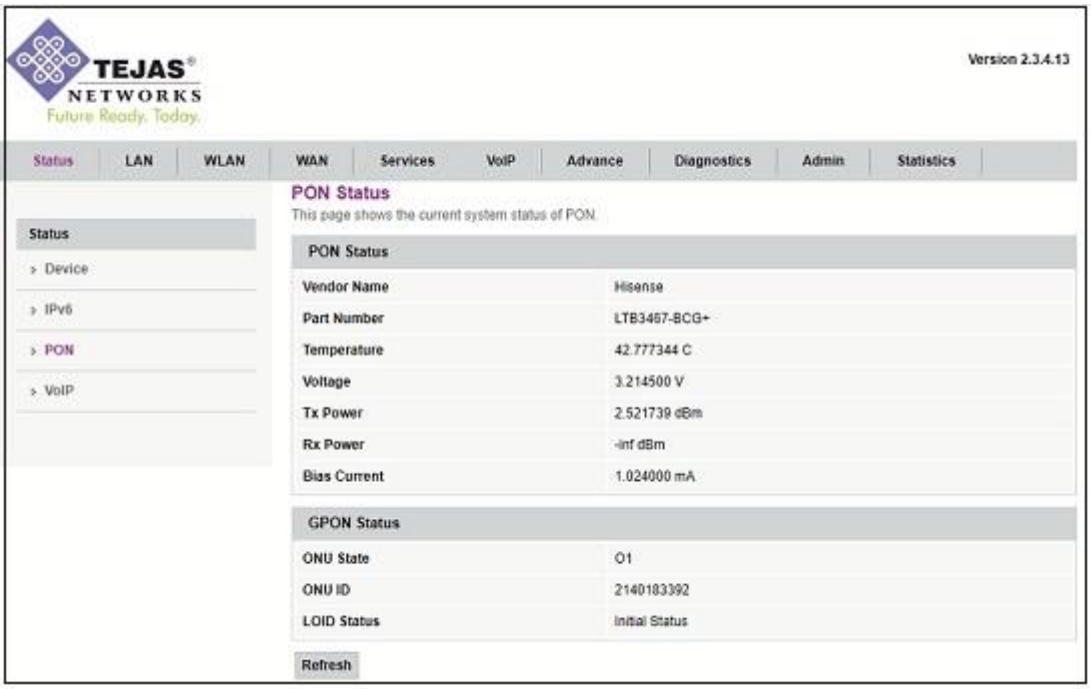


Table 9: PON Status parameters

Parameter	Description
PON Status	
Vendor Name	Displays the name of the vendor for optical device of ONT.
Part Number	Displays the part number of optical device of ONT.
Temperature	Displays the temperature of the ONT in terms of degree celsius.
Voltage	Displays the voltage in terms of Volts for GPON optics.
Tx Power	Displays the power in terms of dBm transmitted by the ONT.
Rx Power	Displays the power in terms of dBm received on the PON port of the OLT node from the ONT connected to it.
Bias Current	Displays the bias current in terms of milliamperes for GPON optics.
GPON Status	
ONU State	Displays the operational state of the ONU.
ONU ID	Displays the number assigned to the ONTG based on the order in which it is discovered.
LOID Status	

Click on the **Refresh** button to refresh or reload the page.

Status- VoIP

To view the register status of the port, select **Device Status-> VoIP** from the navigation menu. **VoIP Register Status** page is displayed.

Figure 6: VoIP Register Status

Table 10: VoIP Register Status parameters

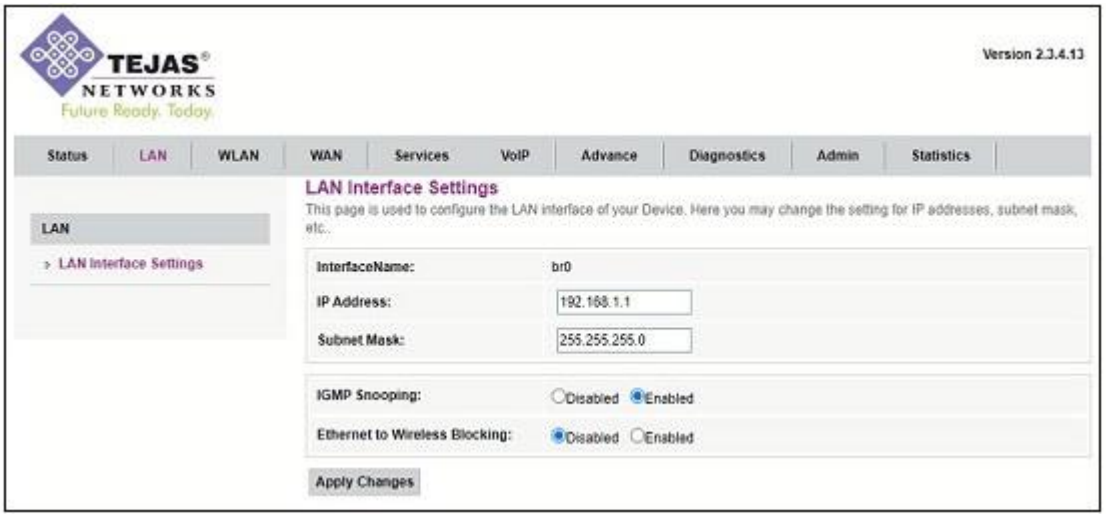
Parameter	Description
Register Status	
Port	Displays the port number.
Status	Displays the status of the port.

Click on the **Refresh** button to refresh or reload the page.

LAN Interface Settings

This page is used to configure the LAN interface of your device. In this page you can change the setting for IP addresses, subnet mask, etc. Go to LAN-> LAN Interface Settings. LAN Interface Settings page is displayed.

Figure 7: LAN Interface Settings



Select or enter the desired values by referring to **LAN Interface Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 11: LAN Interface Settings parameters

Parameter	Description
InterfaceName	Displays the interface name of the ONT.
IP Address	Allows you to enter the IP address of the ONT in the text box provided.
Subnet Mask	Allows you to enter the subnet mask in the text box provided.
IGMP Snooping	Allows you to 'Enable' or 'Disable' IGMP snooping feature by selecting the desired radio button. This is required for IPTV feature on LAN ports of ONT.
Ethernet to Wireless Blocking	Allows you to 'Enable' or 'Disable' Ethernet to Wireless blocking feature by selecting the desired radio button.

WLAN Configuration

Basic Settings

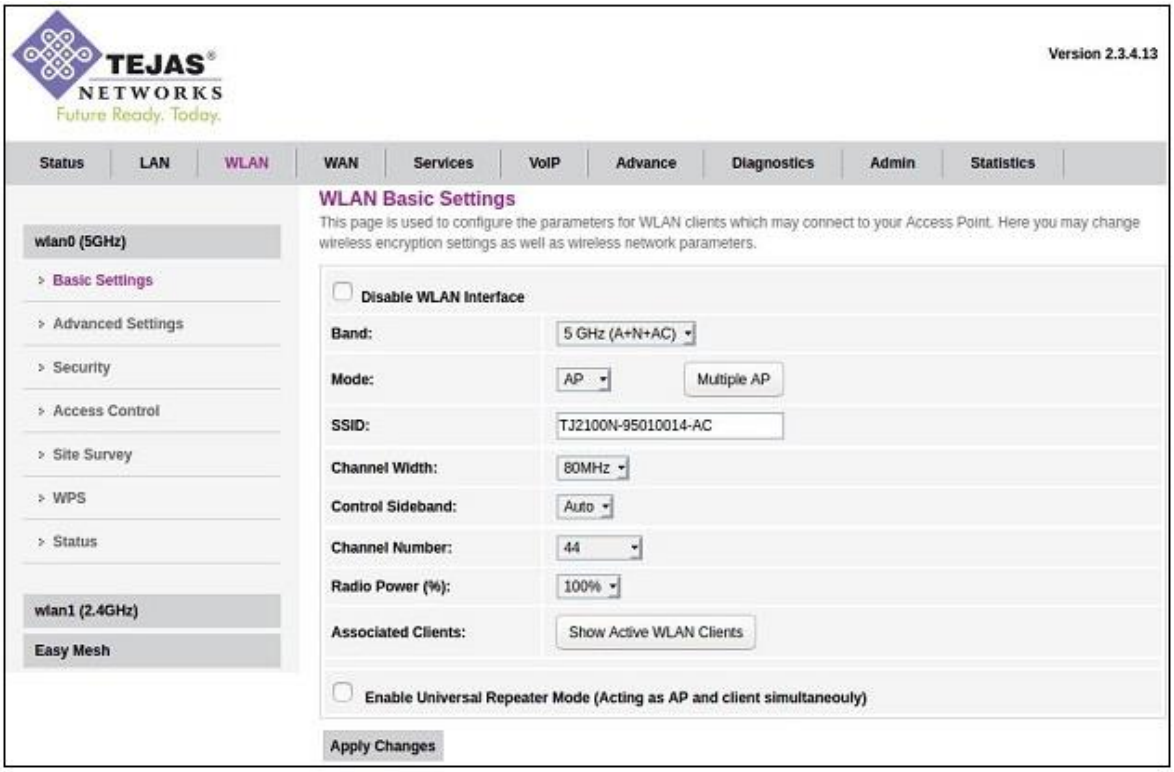
Go to wlan0 **(5GHz)/ wlan1 (2.4GHz) -> Basic Settings** in the navigation pane. **WLAN Basic Settings** page is displayed.

This page is used to configure the parameters for WLAN clients that may connect your access points. In this page you may change wireless encryption settings as well as wireless network parameters.

Following figure shows the WLAN Basic Settings of wlan0 (5GHz) (An example):

> **NOTE:** Each of the parameter can be configured by drop down menus provided in the page.

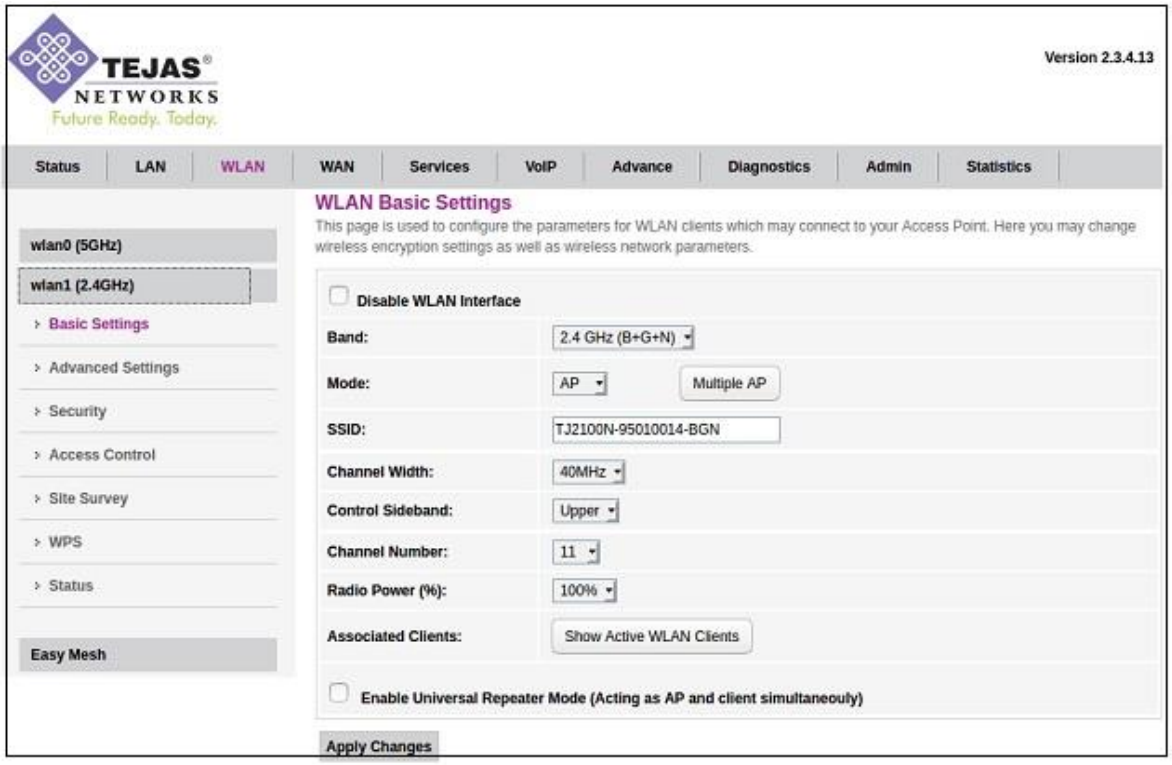
Figure 8: WLAN Basic Settings



Following figure shows the WLAN Basic Settings of wlan1 (2.4GHz) (An example):

NOTE: Each of the parameter can be configured by drop down menus provided in the page.

Figure 9: WLAN Basic Settings- 2.4GHz



Select or enter the desired values by referring to **WLAN Basic Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 12: WLAN Basic Settings parameters

Parameter	Description
Disable WLAN Interface	Allows you to select the check box to enable or disable WLAN interface.
Band	Allows you to select the frequencies from the drop down menu. **For wlan0 (5GHz):** • 5GHz (A) • 5GHz (N) • 5GHz (A + N) • 5GHz (AC) • 5GHz (N + AC) • 5GHz (A+ N + AC) **For wlan1 (2.4GHz):** • 2.4GHz (B) • 2.4GHz (G) • 2.4GHz (B + G) • 2.4GHz (N) • 2.4GHz (G + N) • 2.4GHz (B+ G + N)
Mode	Allows you to select the WLAN mode from the drop down menu. • AP (Default) • Client (Do not use this mode, unless you are clear of wireless client)
Multiple AP	On selecting **AP mode**, Multiple AP parameter can be configured. On clicking **Multiple AP** button, **Multiple APs** page will be displayed. This page shows and updates the wireless setting for multiple APs. Following parameters are displayed on **Multiple APs** page: • **AP Isolation:** Allows you to enable or disable AP isolation by selecting the desired radio button. • **No.**: Lists the multiple APs. These are also called guest SSIDs. • **Enable:** Allows you to select the check box, to modify the details of the following parameters: Band, SSID Data Rate, Broadcast SSID WMM, Client Isolation, Active Client List, Multicast to Unicast. Select the desired values and click **Apply changes**. To revert to default values on the page, click **Reset** button. **NOTE:** This parameter is not applicable when **Disable WLAN Interface** check box is selected.

Parameter	Description
SSID	Allows you to enter the SSID name (Service Set Identifier) in the text box provided. An SSID is a unique ID that consists of 32 characters and is used for naming wireless networks. When multiple wireless networks overlap in a certain location, SSIDs make sure that data gets sent to the correct destination.
Channel Width	Allows you to select the channel width from the drop down menu. Channel width basically controls how broad the signal is for transferring data. **For wlan0 (5GHz):** • 20MHz • 40MHz • 80MHz **For wlan1 (2.4GHz):** • 20MHz • 40MHz
Control Sideband	Allows you to select the Control Sideband from the drop down menu. The Control Side Band field defines the sideband which is used for the secondary or extension channel when the AP is operating in 40 Mhz channel width. **For wlan0 (5GHz):** Auto **For wlan1 (2.4GHz):** • Upper • Lower
Channel Number	Allows you select the channel number from the drop down menu. **For wlan0 (5GHz):** • Auto (DFS) • 36 to 64 (integral multiples of 4) • 100 to 112 (integral multiples of 4) • 149 to 161 (integral multiples of 4) **For wlan1 (2.4GHz):** • Auto • 5 to 11
Radio Power (%)	Allows you to set the power consumption of WiFi router from the drop down menu. • 100% • 70% • 50% • 35% • 15%

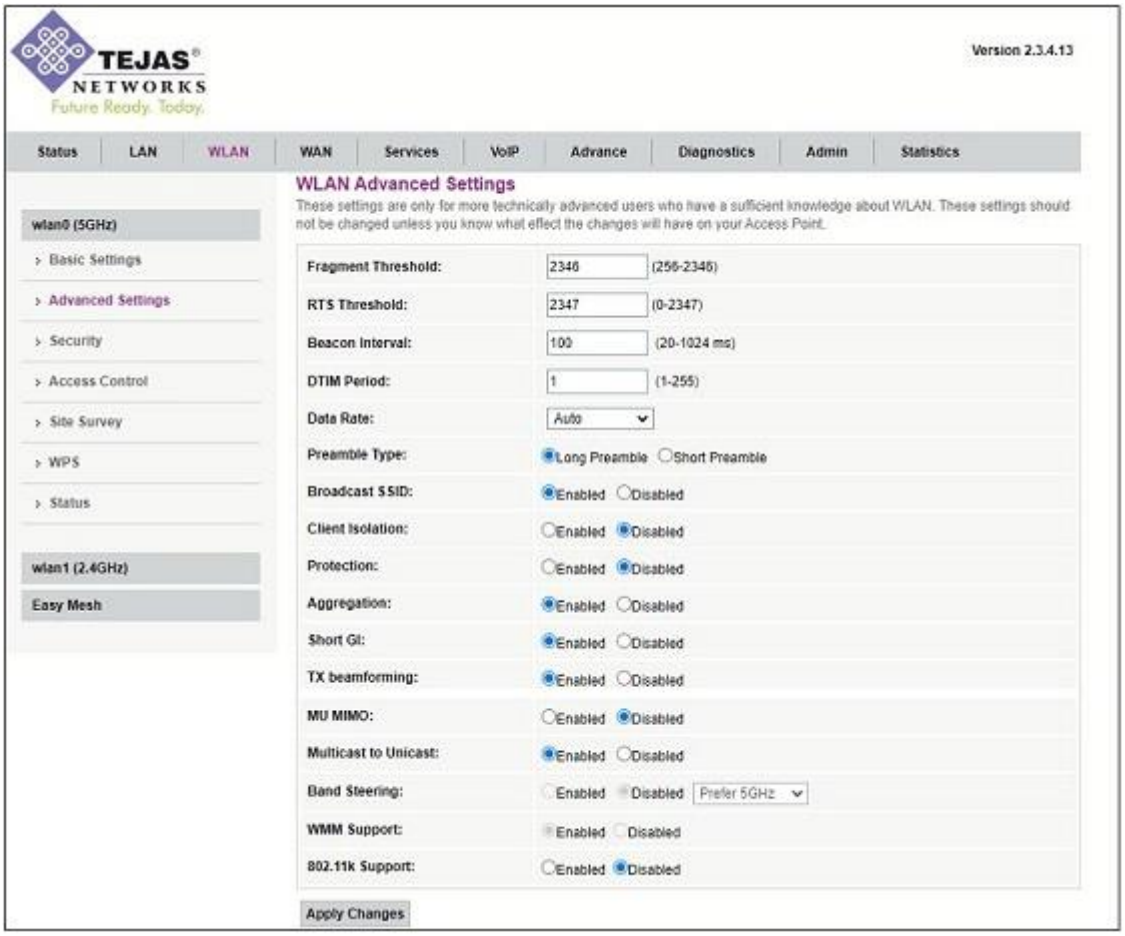
Parameter	Description
Associated Clients	Shows the details of the associated wireless client. On clicking **Show Active WLAN Clients** button, **Active WLAN Clients** page is displayed that shows the MAC Address, transmission, reception packet counters and encrypted status for each associated WLAN clients. • MAC Address • Tx Packets • Rx Packets • Tx Rate (Mbps) • Power Saving • Expired Time (sec) Click **Refresh** button to reload the page. Click **Close** button to close the page.
Enable Universal Repeater Mode	Select this check box for WLAN to act as Client and AP modes simultaneously.

Advanced Settings

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> Advanced Settings** in the navigation pane. **WLAN Advanced Settings** page is displayed. These settings are only for more technically advanced users who have a sufficient knowledge about WLAN. These settings should not be changed unless you know what effect the changes will have on your Access Point.

Following figure shows the WLAN Advanced Settings of wlan0 (5GHz)/wlan1 (2.4GHz):

Figure 10: WLAN Advanced Settings- 5GHz/2.4GHz



Select or enter the desired values by referring to **WLAN Advanced Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 13: WLAN Advanced Settings parameters

Parameter	Description
Fragment Threshold	Allows you to enter the fragmentation threshold that limits the size of packets transmitted over the wireless network. If a packet exceeds the fragmentation threshold, it is sent as multiple 802.11 frames. The range used for fragmentation threshold is 256 to 2346. The default value is 2346. Do not change these settings.
RTS Threshold	Allows you to enter RTS (Request to Send), the optional mechanism used by the 802.11 wireless networking protocol to reduce frame collisions. The RTS packet size threshold is 0 to 2347 octets. Typically, sending RTS frames does not occur unless the packet size exceeds this threshold.
Beacon Threshold	Allows you to enter beacon interval to help keep the network synchronized. Default value is 100ms. Range of beacon interval is 20ms to 1024ms. 100ms is recommended settings.
DTIM Period	Allows you to enter DTIM (Delivery Traffic Indication Map or Message) period, a time interval to wake up wireless clients from Sleep Mode. Range of DTIM period is 1-255. The default value is 3.
Data Rate	Allows you to select the transmission speed from the drop down menu.
Preamble Type	Allows you to set the desired mode by selecting the radio button against **Long Preamble** or **Short Preamble**.
Broadcast SSID	Allows you to enable or disable broadcast SSID by selecting desired radio button.
Client Isolation	Allows you to enable or disable Client Isolation by selecting desired radio button. When this is enabled, it prevents a device that is connected to the network by a wireless connection from accessing resources that are connected to the network by a wired connection.
Protection	Allows you to enable or disable protection by selecting desired radio button.
Aggregation	Allows you to enable or disable the transmission of link aggregation details such as status, capabilities, and port ID to the remote system.
Short GI	Allows you to enable or disable short GI (Guard Interval) by selecting desired radio button. Short GI can be used in the following scenarios: • When intending to improve the throughput, enabling short GI can improve the throughput about 10%. • If the multi path effect is not too serious, you can enable short GI. • If you are using 802.11n or 802.11ac only, you can enable short GI. In another word, when using mixed mode, please disable the short GI, which may cause issues.

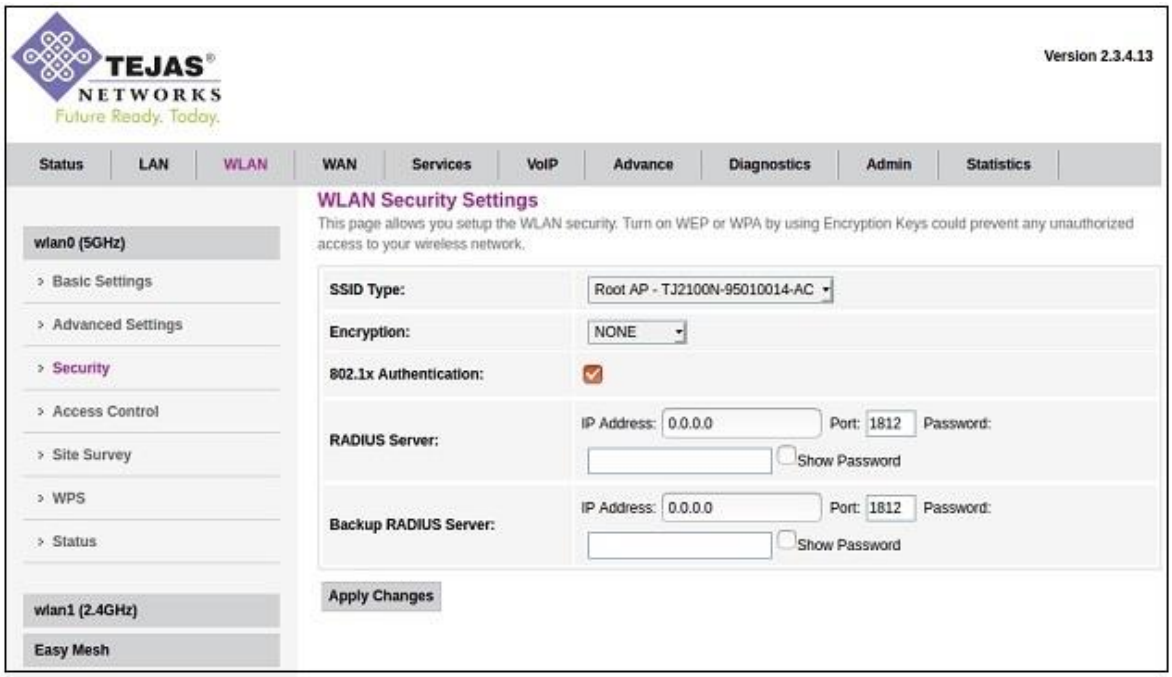
Parameter	Description
Tx beamforming	Allows you to enable or disable beamforming transmission by selecting desired radio button. This allows you to focus on a wireless signal towards a specific receiving device, rather than having the signal spread in all directions from a broadcast antenna
MU MIMO	Allows you to enable or disable MU-MIMO transmission by selecting desired radio button. This parameter is displayed only when **Tx beamforming is enabled.** Multi-user MIMO (MU-MIMO) is a set of multiple-input and multiple-output (MIMO) technologies for wireless communication, in which a set of users or wireless terminals, each with one or more antennas, communicate with each other.
Multicast to Unicast	Allows you to enable or disable multicast to unicast conversion by selecting desired radio button. When enabled, multicast packets may be replaced by one unicast packet per destination station. Each unicast packet is transmitted at the highest speed the destination station will accept.
Band Steering	Allows you to enable or disable band steering feature by selecting desired radio button. The band steering feature encourages dual-band-capable clients to stay on the 5 GHz band on dual-band APs for maximizing throughput. This ability frees up resources on the 2.4 GHz band for single-band clients.
WMM Support	Allows you to enable or disable Wireless Multimedia (WMM) support by selecting desired radio button.
802.11k Support	Allows you enable or disable 802.11k standard support by selecting desired radio button.
802.11v Support	Allows you enable or disable 802.11k standard support by selecting desired radio button. **NOTE:** This parameter is displayed only when **802.11k Support** is enabled.

Security

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> Security** in the navigation pane. **WLAN Security Settings** page is displayed. This page allows you to setup the WLAN security. Turn on WEP (Wired Equivalent Privacy) or WPA (Wireless Protected Access) by using encryption keys could prevent any unauthorized access to your wireless network.

Following figure shows the WLAN Security Settings of wlan0 (5GHz)/wlan1 (2.4GHz):

Figure 11: WLAN Security Settings- 5GHz/2.4GHz



Select or enter the desired values by referring to **WLAN Security Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 14: WLAN Security Settings parameters

Parameters	Description
SSID Type	Allows you to select the SSID type from the drop down menu.
Encryption	Allows you to select the type of data encryption required for the specific SSID from the drop down menu. • None • WEP • WPA2 • WPA2 Mixed
802.1x Authentication	Allows you to select the check box for 802.1x authentication standard. On selecting this check box, following parameters are displayed: • **RADIUS Server:** Enter the **IP address**, **UDP port number** and **shared secret key** of the RADIUS (Remote Authentication Dial-In User Service) server. The port number is usually 1812 to 1645 and depends upon the server. • **Backup RADIUS Server:** Enter the **IP address**, **UDP port number** and **shared secret key** of the backup RADIUS server.

Access Control

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> Access Control** in the navigation pane. **WLAN Access Control** page is displayed.

Following figure shows the WLAN Access Control page of wlan0 (5GHz) or wlan1 (2.4GHz):

Figure 12: WLAN Access Control- 5GHz/2.4GHz

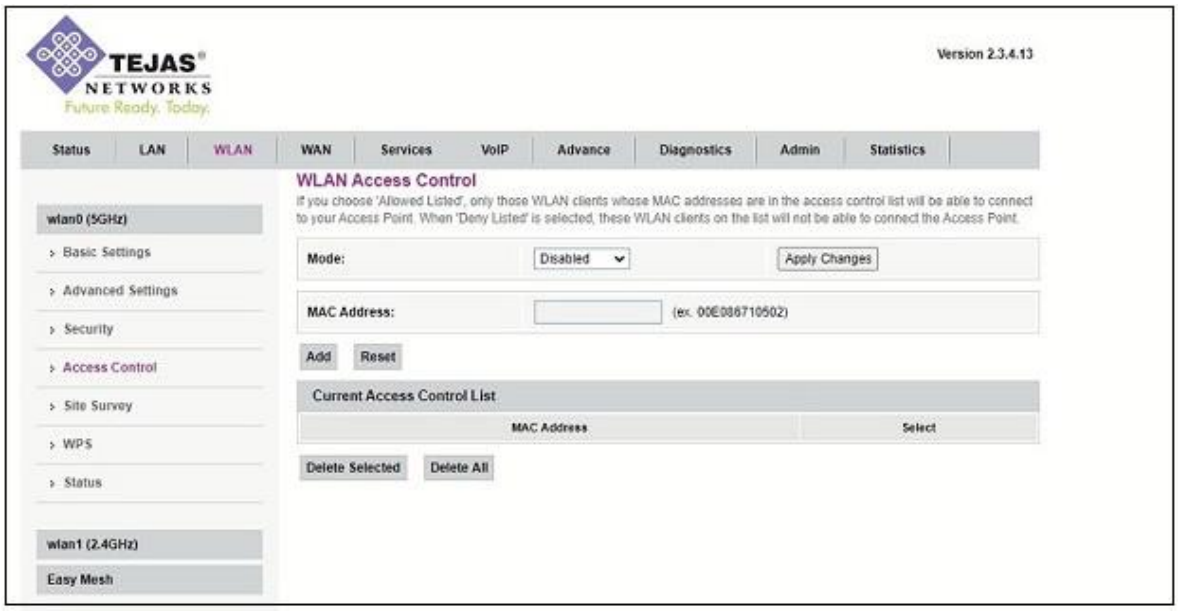


Table 15: WLAN Access Control parameters

Parameters	Description
Mode	Allows you to select the desired mode from the drop down menu. Available options are: • **Disabled:** Access control will be disabled. • **Allow Listed:** Only WLAN clients whose MAC address are in the access control list will be able to connect to your Access Point. • **Deny Listed:** WLAN clients on the access control list will not be able to connect to your Access Point.
MAC Address	Allows you to enter the specified MAC address in the text box provided.
Current Access Control List	
MAC Address	Displays the configured MAC address of the Access Control list.
Select	Allows you to select the check box against the desired MAC address for deletion. • To delete all configured access control list on the pane, click on **Delete All** button. Check box against all MAC address on the page will get selected and will be deleted. • To delete desired access control list on the pane, click on **Delete Selected** button and select the check box against the MAC address desired to be deleted.

Site Survey

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> Site Survey** in the navigation pane. **WLAN Site Survey** page is displayed. This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.

Following figure shows the WLAN Site Survey page of wlan0 (5GHz) or wlan1 (2.4GHz):

Figure 13: WLAN Site Survey- 5GHz/2.4GHz

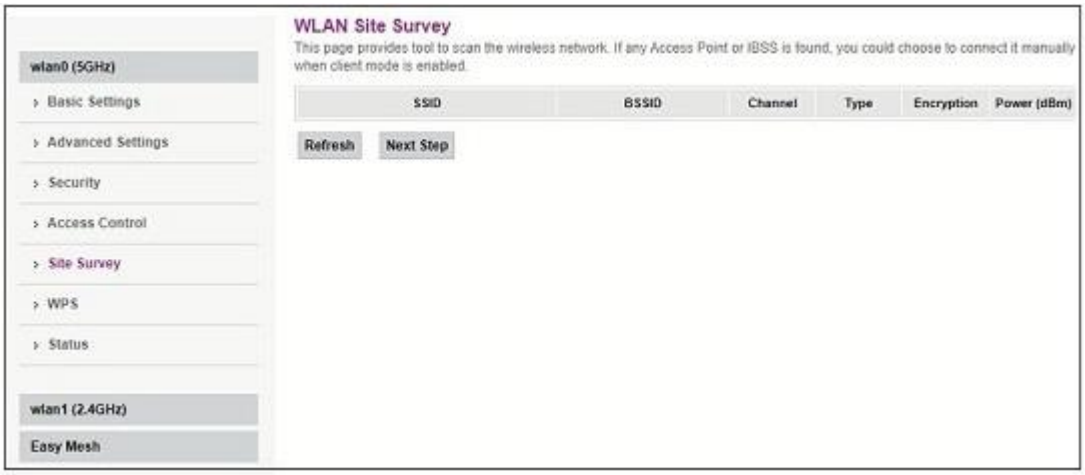


Table 16: WLAN Site Survey parameters

Parameters	Description
SSID	Displays the SSID.
BSSID	Displays the BSSID (Basic Service Set Identifiers), that is used to describe sections of a wireless local area network or WLAN.
Channel	Displays the channel frequency.
Type	Displays the type of channel.
Encryption	Displays the encryption mechanism implemented in the desired WLAN channel.
Power (dBm)	Displays the power of the channel in terms of dBm.

Click **Refresh** button to reload the page.

WPS

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> WPS** in the navigation pane. **Wi-Fi Protected Setup** page is displayed. This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature you could let your WLAN client automatically synchronize its setting and connect to the access point in a minute without any hassle.

Following figure shows the Wi-Fi Protected Setup page of wlan0 (5GHz) or wlan1 (2.4GHz):

Figure 14: Wi-Fi Protected Setup (WPS)- 5GHz/2.4GHz

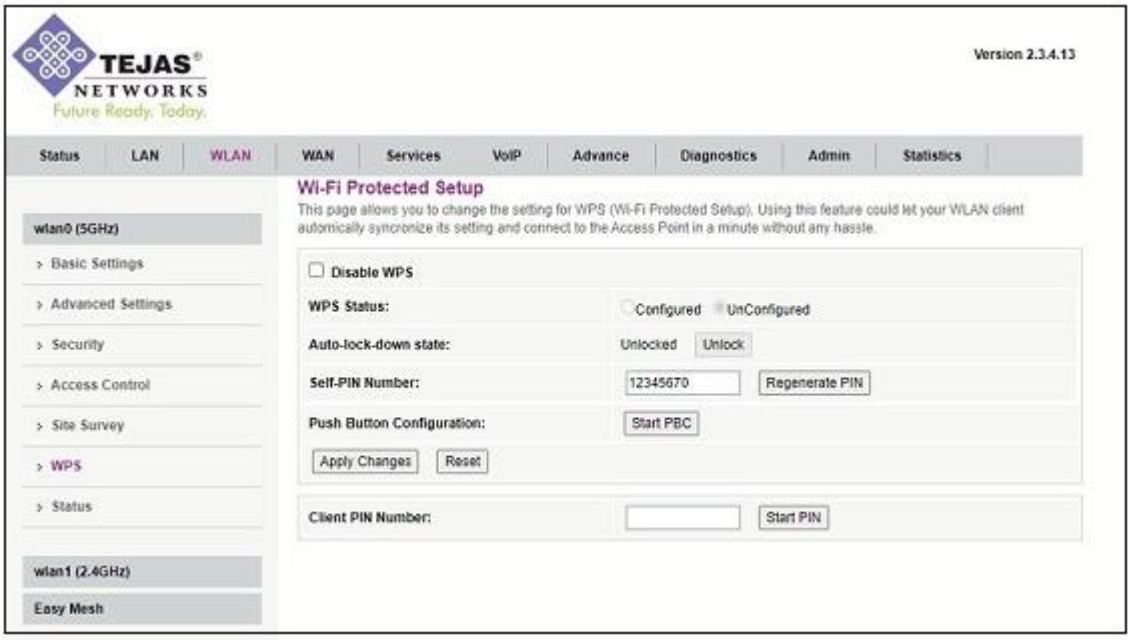


Table 17: Wi-Fi Protected Setup parameters

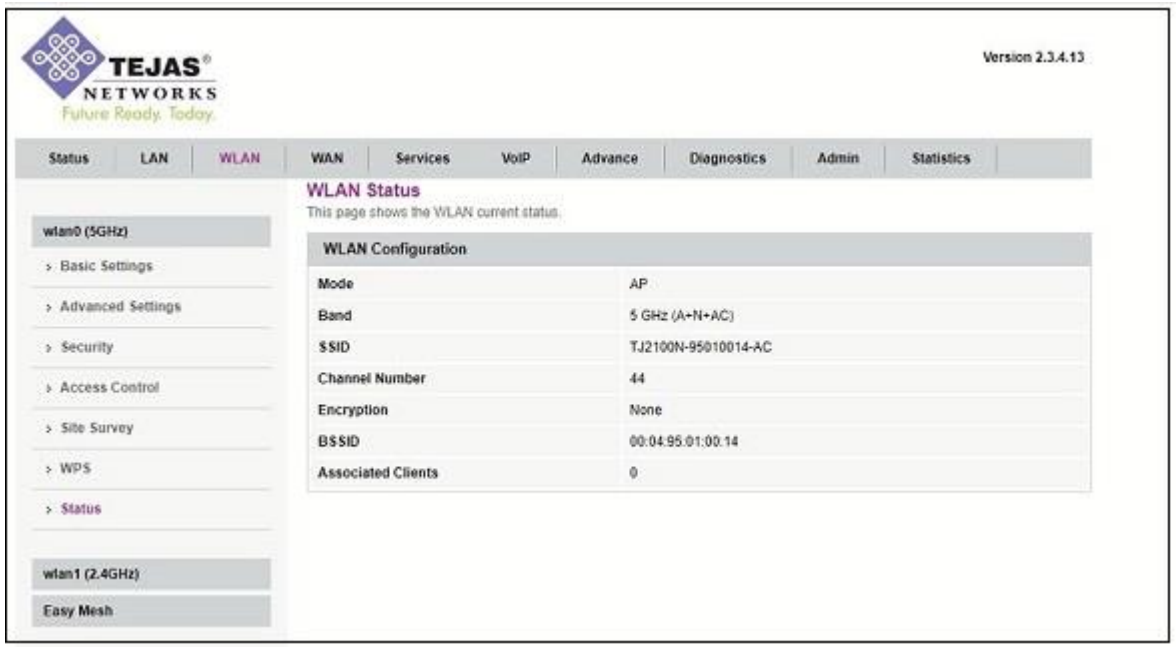
Parameters	Description
Disable WPS	Allows you to select the check box to enable or disable WPS.
WPS Status	Allows you to set the WPS status by selecting the radio button against **Configured** or **UnConfigured.**
Auto lock-down state	Allows you to set the lock-down state.
Self- PIN Number	Allows you to set the PIN number. On clicking **Regenerate PIN** button, it allows you to re-enter the PIN.
Push Button Configuration	On clicking **Start PBC** (Push Button Configuration), WPS devices will connect in which the user simply has to push a button on both WPS devices.
Client PIN Number	Allows you to enter the PIN number in the text box provided. After entering the PIN number, click on **Start PIN** button for connecting WPS devices. Some devices without a WPS button but with WPS support will generate a client PIN. You can then enter this PIN in your router's wireless configuration panels, and the router will use it to add that device to the network.

Status

Go to **wlan0 (5GHz)/ wlan1 (2.4GHz) -> Status** in the navigation pane. **Wi-Fi Status** page is displayed. This page shows the WLAN current status.

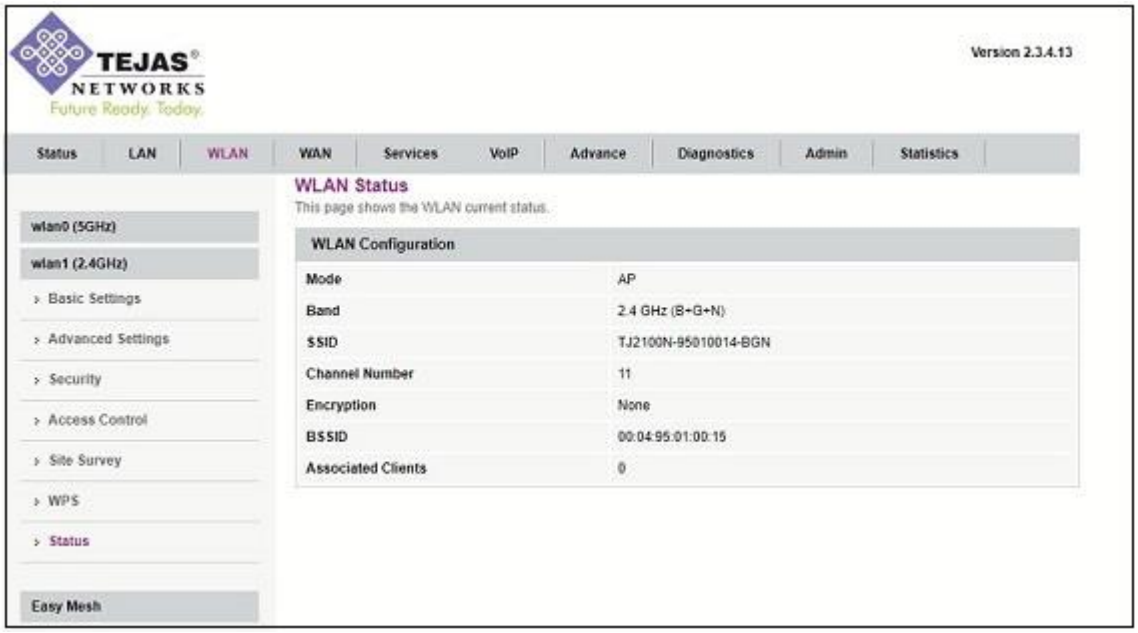
Following figure shows the Wi-Fi Status page of wlan0 (5GHz):

Figure 15: WLAN Status - 5GHz



Following figure shows the Wi-Fi Status page of wlan1 (2.4GHz):

Figure 16: WLAN Status- 2.4GHz



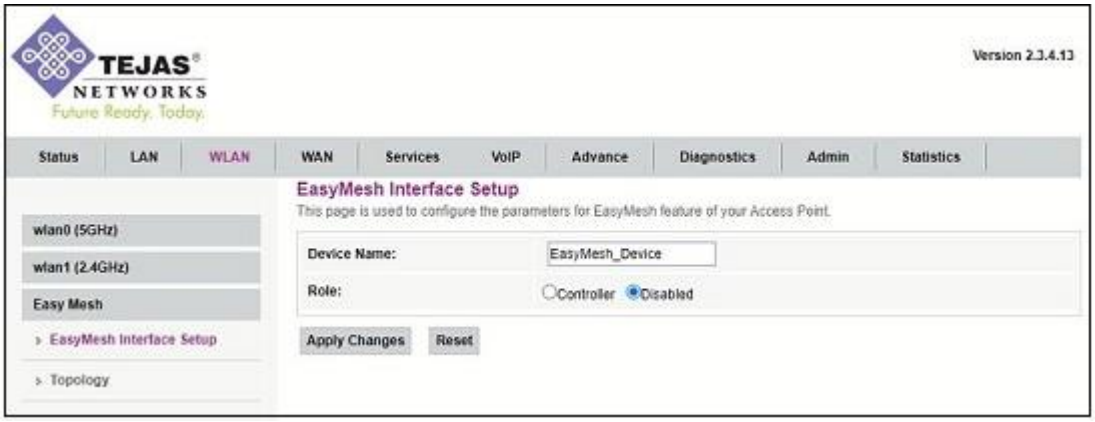
Easy Mesh

Easy Mesh networks employ multiple access points that work together to form a unified network that provides smart, efficient Wi-Fi throughout the home and outdoor spaces.

EasyMesh Interface Setup

Go to wlan0 **Easy Mesh-> EasyMesh Interface Setup** in the navigation pane. **EasyMesh Interface Setup** page is displayed. This page is used to configure the parameters for EasyMesh feature of your access point.

Figure 17: EasyMesh Interface Setup



Select or enter the desired values by referring to **EasyMesh Interface parameters** table and click on **Apply Changes** button to save the changes. To revert to default values on the page, click **Reset** button.

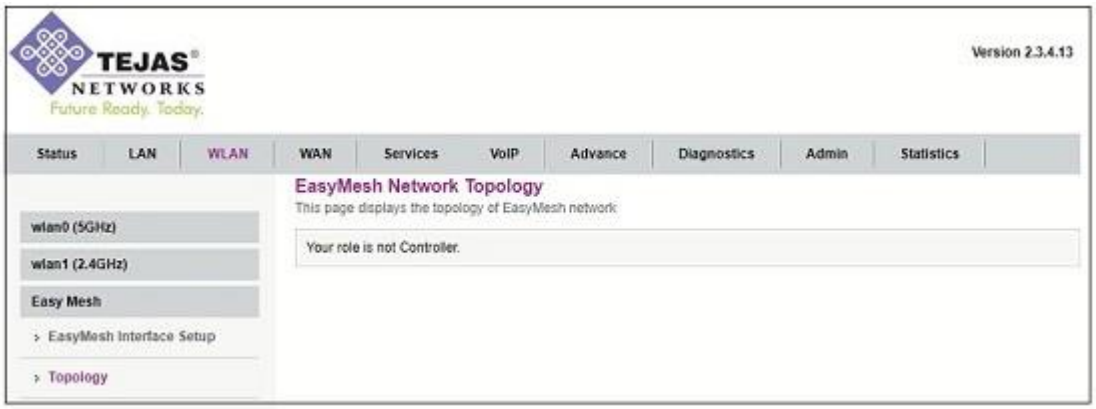
Table 18: EasyMesh Interface parameters

Parameters	Description
Device Name	Enter the name of the device in the text box provided.
Role	Allows you to set the role of the access point by selecting th radio button against **Controller** or **Disabled**.

Topology

Go to wlan0 **Easy Mesh-> Topology** in the navigation pane. **EasyMesh Network Topology** page is displayed. This page displays the topology of EasyMesh network.

Figure 18: EasyMesh Network Topology

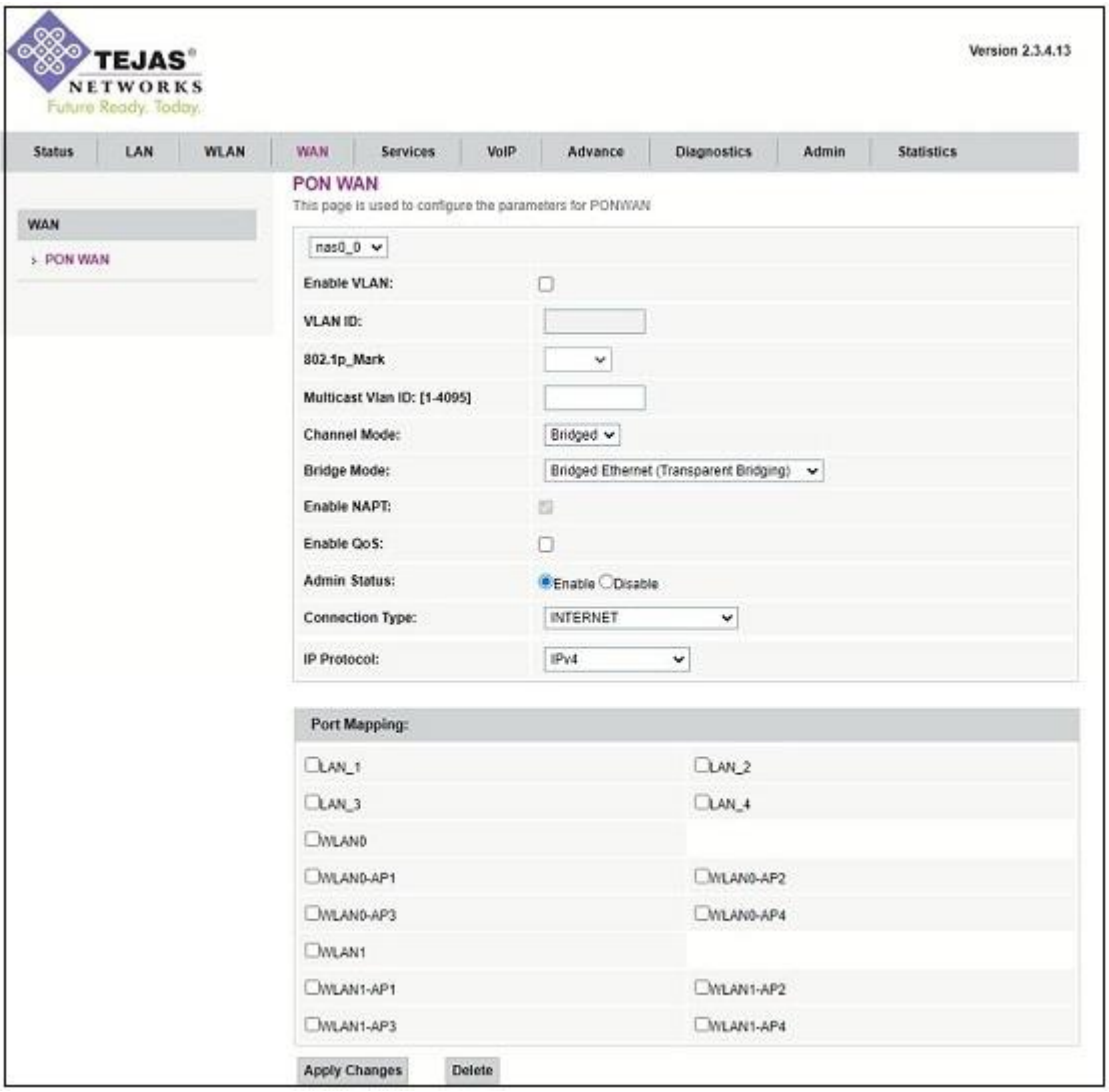


WAN Configuration

This section details the configuration of WAN (Wireless Area Network).

Go to **WAN->PON WAN** in the navigation pane. **PON WAN** page is displayed. This page is used to configure the parameters for PONWAN.

Figure 19: WAN- PON WAN



Select or enter the desired values by referring to **WAN configuration parameters** table and click on **Apply Changes** button to save the changes.

Table 19: WAN configuration parameters

Parameters	Description
Enable VLAN	Allows you to select the check box to enable or disable VLAN (Virtual Local Area Network). On enabling VLAN, parameters **VLAN ID**, **802.1p_Mark** and **Multicast VLAN ID: [1-4095]** are applicable.
VLAN ID	Allows you to enter the VLAN identifier in the text box provided.
802.1p_Mark	Allows to set the priority.The range is from 0-7.
Multicast VLAN ID: [1-4095]	Allows you to enter the VLAN identifier in the text box provided.
Channel Mode	Allows you to select the channel mode. • Bridged • IPoE (Internet Protocol over Ethernet) • PPPoE (Point-to-Point Protocol over Ethernet) • 6rd (IPv6 radid deployment)
Enable Bridge	Allows you to select the check box to enable or disable bridge. This parameter is applicable only when Channel Mode is selected as IPoE, PPPoE, and 6rd.
Bridge Mode	Allows you to select the bridge mode. This parameter is supported only when Channel Mode is selected as 'Bridged'. • Bridged Ethernet (Transparent Bridging) • Bridged PPPoE (implies Bridged Ethernet)
Enable NAPT	Allows you to select the check box to enable or disable NAPT (Network Address and Port Translation) that allows a single device to be an agent between the Internet and a local network. This parameter is applicable only when Channel Mode is selected as IPoE, PPPoE, and 6rd.
Enable QoS	Allows you to select the check box to enable or disable QoS (Quality of Service).
Admin Status	Allows you to enable or disable the administrative status of WAN by selecting the desired radio button.

Parameters	Description
Connection Type	Allows you to select the connection type from the drop down menu. • Other • TR069 • INTERNET • INTERNET_TR069 • VOICE • VOICE_TR069 • VOICE_INTERNET • VOICE_INTERNET_TR069
MTU	Allows you to enter the maximum size of a packet that can be sent through the interface. This parameter is applicable only when Channel Mode is selected as IPoE, PPPoE, and 6rd.
IP Protocol	Allows you to select the IP protocol from the drop down menu. • IPv4 • IPv6 • IPv4/IPv6
WAN IP Settings: These parameters are displayed only when Channel Mode is selected as 'IPoE' or '6rd'.	
Type	Allows you to set the type of WAN IP by selecting the radio button as 'Fixed IP' or 'DHCP'.
Local IP Address	Enter the local IP address in the text box provided. A local IP address is used inside a private network to locate the computers and devices connected to it.
Remote IP Address	Enter the remote IP address in the text box provided. This is used to access a computer or device remotely.
Subnet Mask	Enter the subnet mask, a 32-bit number that masks an IP address, and divides the IP address into network address and host address.
IP Unnumbered	Select the check box to enable IP unnumbered interface, method that you can use to enable IP processing on a Point to Point interface without assigning it an IP address to conserve the IP address space.
Request DNS	Allows you to enable or disable DNS request by selecting the desired radio button.
Primary DNS Server	Enter the IP of the primary DNS server in the text box provided.
Secondary DNS Server	Enter the IP of the secondary DNS server in the text box provided.
PPP Settings: These parameters are displayed only when Channel Mode is selected as 'PPPoE'. External PPPoE server is needed for authentication.	

Parameters	Description
UserName	Enter the user name in the text box provided.
Password	Enter the password in the text box provided.
Type	Allows you to select the type from the drop down menu.
Idle Time (sec)	Enter the idle time in seconds.
Authentication Method	Allows you to select the authentication method as 'AUTO' from the drop down menu.
AC-Name	Allows you to enter the AC (Access Concentrator) name in the text box provided. Access concentrators are used to route PPPoE connections. These devices allow the service providers to grant access to large numbers of users without needing to create a dedicated connection for each one.
Service-Name	Allows you to enter the service name in the text box provided.
IPv6 WAN Setting: These parameters are displayed only when Channel Mode is selected as 'IPoE' or 'PPPoE'.	
Address Mode	Select the address mode from the drop down menu.
Request DNS	Allows you to enable or disable DNS request by selecting the desired radio button.
Primary IPv6 DNS	Enter the IPv6 address of the primary DNS server in the text box provided.
Secondary IPv6 DNS	Enter the IPv6 address of the secondary DNS server in the text box provided.
6rd Config: These parameters are displayed only when Channel Mode is selected as '6rd'.	
Board Router v4 Address	Allows you to enter the IPv4 address of the router in the text box provided.
6rd IPv4 Mask Len	Allows you to enter the IPv4 mask length for 6rd configuration.
6rd Prefix	Allows you to enter the 6rd Prefix, IPv6 prefix assigned by a carrier for a 6RD address.
6rd Prefix Length	Allows you to enter the prefix length, that indicates the number of high-order bits to be deleted from the source tunnel address (an IPv4 address).
Port Mapping	Allows you to select the ports in the check box for deletion.

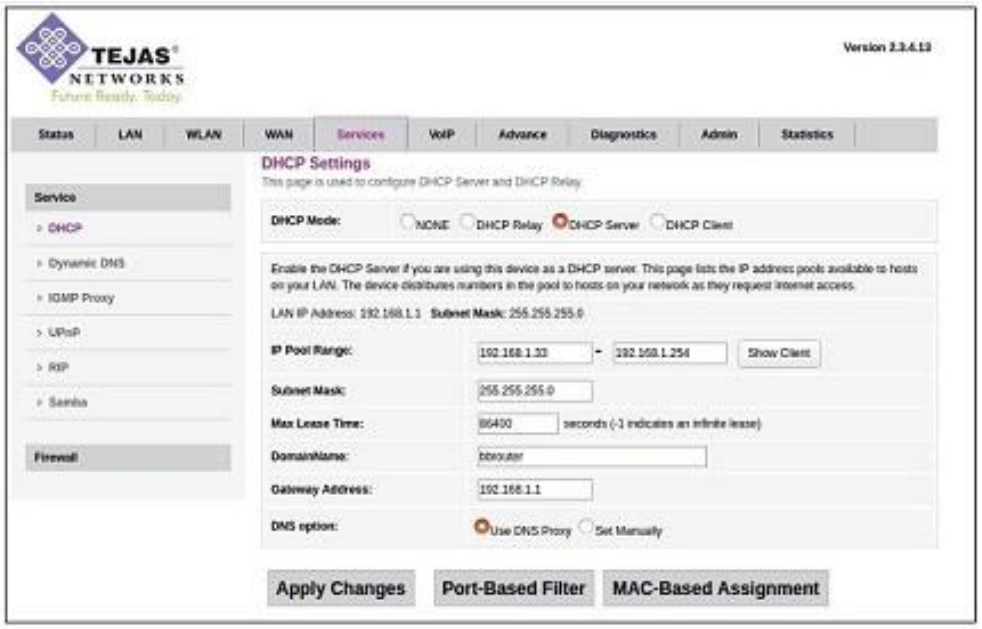
Services

This section details the services that can be configured in TJ2100N-14ET ONT.

DHCP

Go to **Service->DHCP** in the navigation pane. **DHCP Settings** page is displayed. This page is used to configure DHCP Server and DHCP Relay.

Figure 20: DHCP Settings



Select or enter the desired values by referring to **DHCP Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 20: DHCP Settings parameters

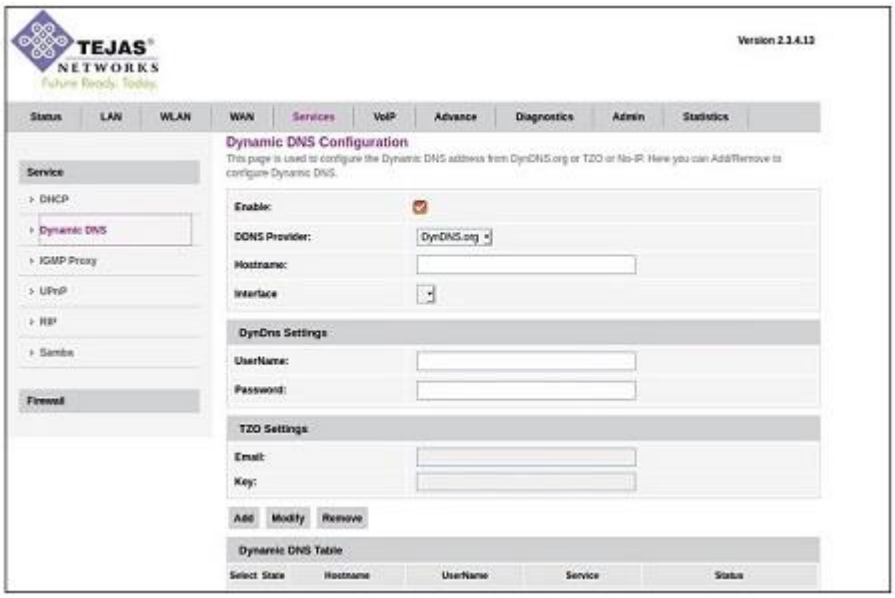
Parameter	Description
DHCP Mode	Allows you to set the DHCP mode by selecting the radio button against 'DHCP Relay' and 'DHCP Server'.
DHCP Server: Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.	
IP Pool Range	Enter the range of IP Pool addresses in the text box provided. An IP pool is a sequential range of IP addresses within a certain network. On clicking, **Show Client** button, **Active DHCP Clients** page is displayed that shows the assigned IP address, MAC address and time expired for each DHCP leased client. Following parameters are displayed in **Active DHCP Clients** page: • IP Address • MAC Address • Expired Time (sec) Click **Refresh** button to reload the page. Click **Close** button to close the page.
Subnet Mask	Allows you to enter the subnet mask in the text box provided.
Max Lease Time	Allows you to enter the maximum lease time in the text box provided. When DHCP lease expires, it must renew the lease and potentially receive a new IP address.
DomainName	Allows you to enter the domain name in the text box provided.
Gateway Address	Enter the gateway IP address, that refers to a device on a network which sends local network traffic to other networks.
DNS option	Allows you to set the DNS option by selecting the radio button against 'Use DNS Proxy' or 'Set Manually'. • **DNS Proxy:** Takes DNS queries from a local network and forwards them to an Internet Domain Name Server. • **Set Manually:** Allows you to enter the IP address of DNS servers, DNS1, DNS2, DNS3 individually in the text box provided.
Port-Based Filter	On clicking this button, **Port-Based Filter** page is displayed that is used to configure the Port-Based Filtering. Select the check box against the desired port and click on **Apply Changes** button, to save the changes. Click **Close** button to close the page.

Parameter	Description
MAC-Based Assignment	On clicking this button, **MAC-Based Assignment** page is displayed that is used to configure the static IP base on MAC Address. Following parameters are displayed: • **Enable:** Select the check box to enable MAC-Based Assignment. • **MAC Address:** Enter the host MAC address. It should be a string with hex number or 17 digits in hex. • **Assigned IP Address:** Enter the assigned IP address. It should be a string with digit. • **MAC-Based Assignment Table:** This details the configured IP address with host MAC address and Assigned IP address. Select the check box the against the desired MAC address for deletion and click on **Delete** button. Click **Assign IP** button to assign the IP. To delete Assigned IP, click on **Delete Assigned IP** button. To modify the IP address, click on **Modify IP** button. Click **Close** button to close the page.
DNS Relay: This page is used to configure the DHCP Server IP Address for DHCP Relay.	
DHCP Server IP Address	Enter the IP address of the DHCP Server in the text box provided. Click on **Apply Changes** button, to save the changes.

Dynamic DNS

Go to **Service->Dynamic DNS** in the navigation pane. **Dynamic DNS Configuration** page is displayed. This page is used to configure the Dynamic DNS address from DynDNS.org or TZO or No-IP. Here you can Add/Remove to configure Dynamic DNS.

Figure 21: Dynamic DNS Configuration



Select or enter the details by referring to **Dynamic DNS Configuration parameters** and click on **Add** button.

Table 21: Dynamic DNS Configuration parameters

Parameter	Description
Enable	Select the check box to enable Dynamic DNS Configuration.
DDNS Provider	Select the Dynamic DNS provider from the drop down menu. • DynDNS.org • TZO • No-IP
Hostname	Enter the host name in the text box provided.
Interface	Select the interface from the drop down menu.
DynDns Settings	
UserName	Enter the user name in the text box provided.
Password	Enter the password in the text box provided.
TZO Settings	
Email	Enter the email address in the text box provided.
Key	Enter the secured key in the text box provided.
Dynamic DNS Table	This table lists the Dynamic DNS configured. Select the check box against the desired user name for deletion and click on **Remove** button.

To modify the details of Dynamic DNS Configuration, click on **Modify** button and edit the required details.

IGMP Proxy

Go to **Service->IGMP Proxy** in the navigation pane. **IGMP Proxy Configuration** page is displayed. IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts when you enable it by doing the follows:

- Enable IGMP proxy on WAN interface (upstream), which connects to a router running IGMP.
- Enable IGMP on LAN interface (downstream), which connects to its hosts.

Figure 22: IGMP Proxy Configuration

Enter the desired values by referring to **IGMP Proxy configuration parameters** table and click on **Apply Changes** button to save the changes.

Table 22: IGMP Proxy configuration parameters

Parameter	Description
IGMP Robust Count	Enter the IGMP robust count to set the IGMP querier's robustness variable on an interface.
Last Member Query Count	Enter the Last Member Query Count to configure number of times the software sends an IGMP query in response to a host leave message.
Query Interval	Enter the query interval that defines the amount of time a router will store particular IGMP state if it does not hear any reports on the group.
Query Response Interval	Enter the query response interval, the time that a host has to respond to a membership query.
Group leave delay	Enter the group leave delay in the text box provided.

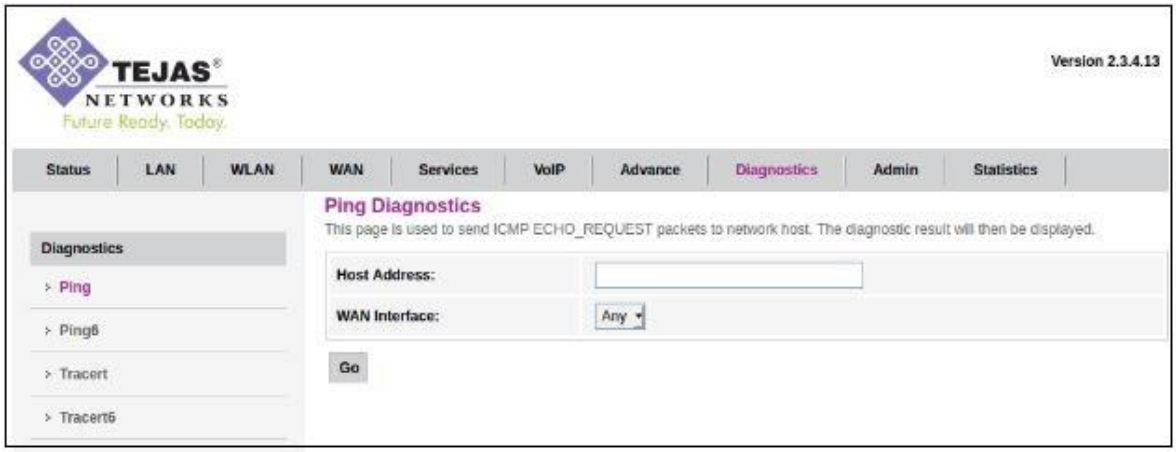
Diagnostics

This section details the diagnostics related information.

Ping

1. Go to **Diagnostics->Ping** in the navigation pane. **Ping Diagnostics** page is displayed. This page is used to send ICMP ECHO_REQUEST packets to network host. The diagnostic result will then be displayed.

Figure 23: Ping Diagnostics



2. Enter the **Host Address** and **WAN Interface** from the drop down and click on **Go** button.

3. ICMP ECHO_REQUEST packets will be sent to the defined host and the success message will be displayed.

Ping6

1. Go to **Diagnostics->Ping6** in the navigation pane. **Ping6 Diagnostics** page is displayed. This page is used to send ICMPv6 ECHO_REQUEST packets to network host. The diagnostic result will then be displayed.

Figure 24: Ping6 Diagnostics

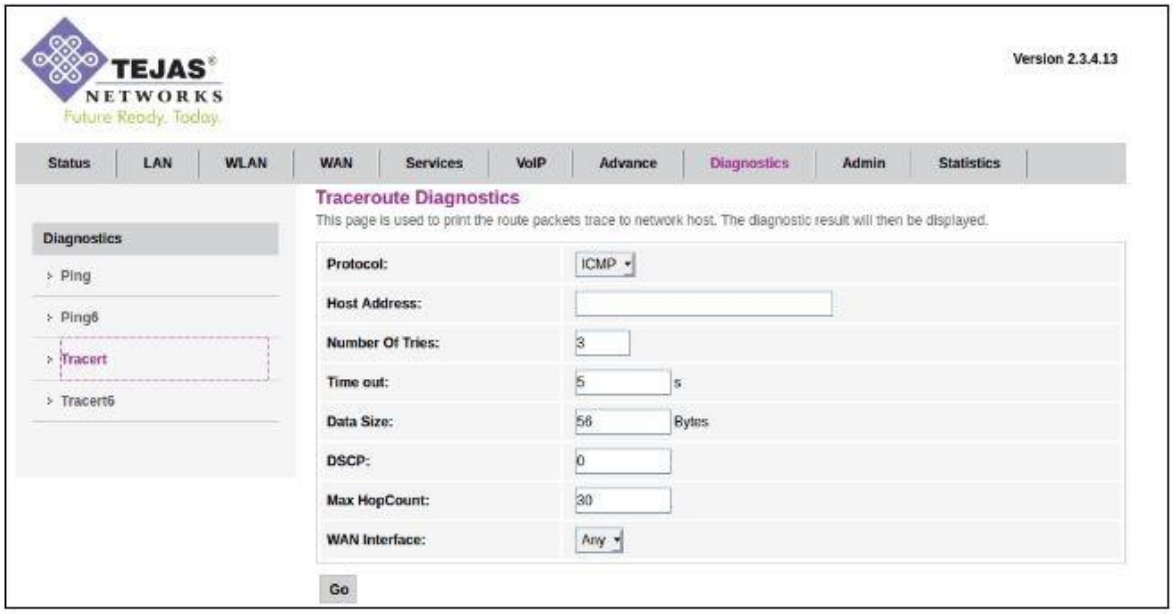
2. Enter the **Host Address** and **WAN Interface** from the drop down and click on **Go** button.

3. ICMPv6 ECHO_REQUEST packets will be sent to the defined host and the success message will be displayed.

Tracert (Trace route to a destination host using IPV4 traffic)

Go to **Diagnostics->Tracert** in the navigation pane. **Traceroute Diagnostics** page is displayed. This page is used to print the route packets trace to network host. The diagnostic result will be displayed.

Figure 25: Traceroute Diagnostics



Select or enter the required parameters by referring to **Traceroute Diagnostics parameters** and click on **Go** button.

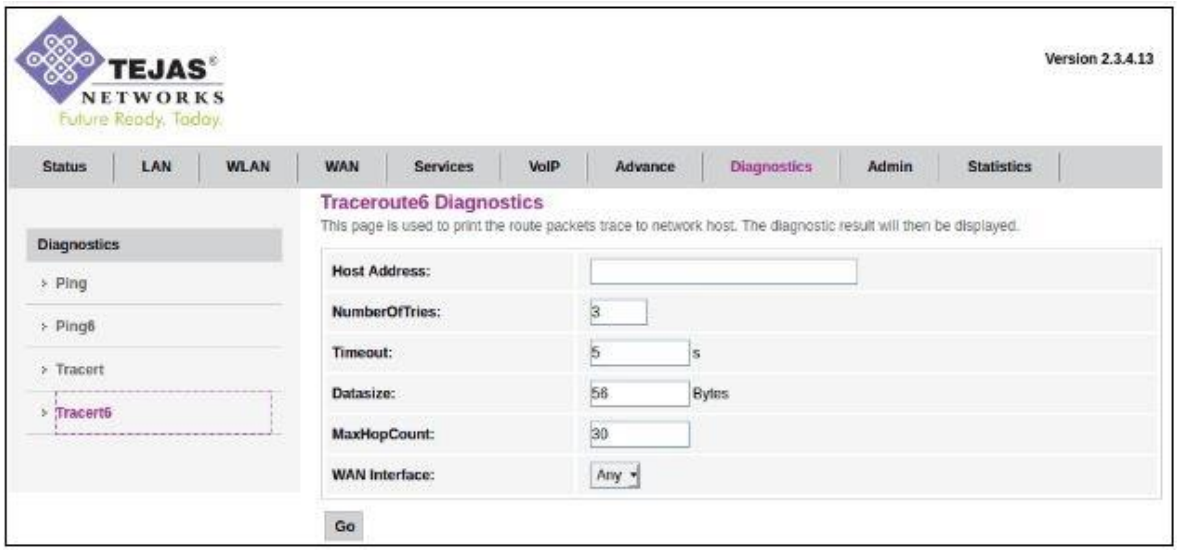
Table 23: Traceroute Diagnostics parameters

Parameter	Description
Protocol	Select the protocol to be used from the drop down menu. • ICMP • UDP
Host Address	Allows you to enter the host address in the text box provided.
Number Of Tries	Allows you to enter the number of attempts in the text box provided.
Time out	Enter the timeout in seconds.
Data Size	Enter the data size in bytes.
DSCP	Enter the DSCP value in the text box provided.
Max HopCount	Enter the maximum hop count in the text box provided.
WAN Interface	Allows you to select the WAN interface from the drop down menu.

Tracert6 (Trace route to a destination host using IPv6 traffic)

Go to **Diagnostics->Tracert6** in the navigation pane. **Traceroute6 Diagnostics** page is displayed. This page is used to print the route packets trace to network host. The diagnostic result will be displayed.

Figure 26: Traceroute6 Diagnostics



Select or enter the required parameters by referring to **Traceroute Diagnostics parameters** and click on **Go** button.

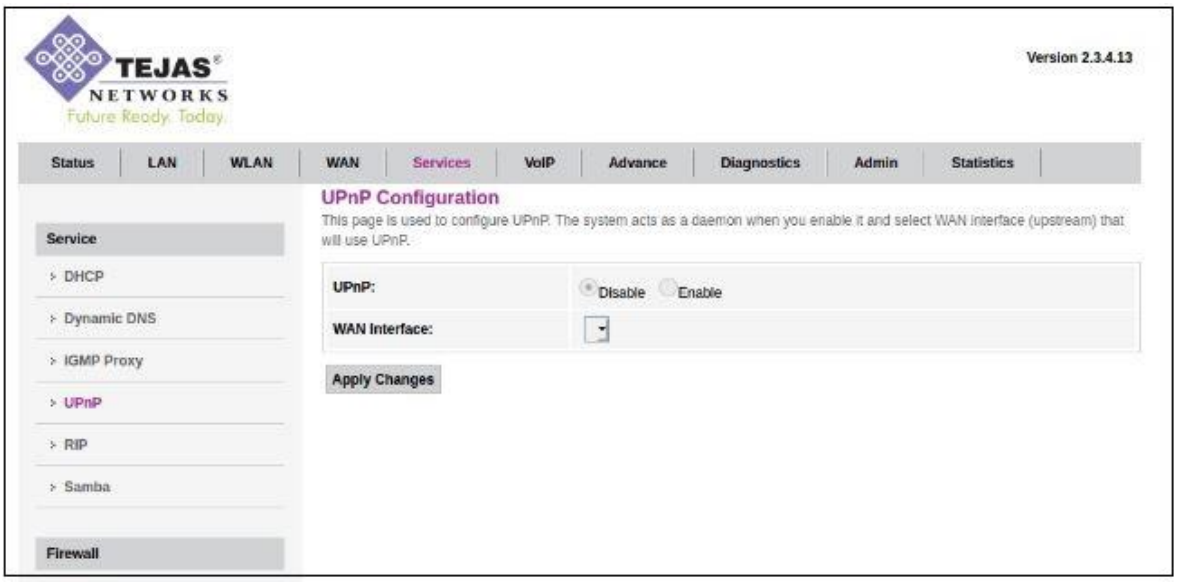
Table 24: Traceroute6 Diagnostics parameters

Parameter	Description
Host Address	Allows you to enter the host address in the text box provided.
Number Of Tries	Allows you to enter the number of attempts in the text box provided.
Time out	Enter the timeout in seconds.
Data Size	Enter the data size in bytes.
Max HopCount	Enter the maximum hop count in the text box provided.
WAN Interface	Allows you to select the WAN interface from the drop down menu.

UPnP (Universal Plug-n-Play)

Go to **Service->UPnP** in the navigation pane. **UPnP Configuration** page is displayed. This page is used to configure UPnP (Universal Plug and Play). The system acts as a daemon when you enable it and select WAN interface (upstream) that will use UPnP.

Figure 27: UPnP Configuration



Enter the desired values by referring to **UPnP configuration parameters** table and click on **Apply Changes** button to save the changes.

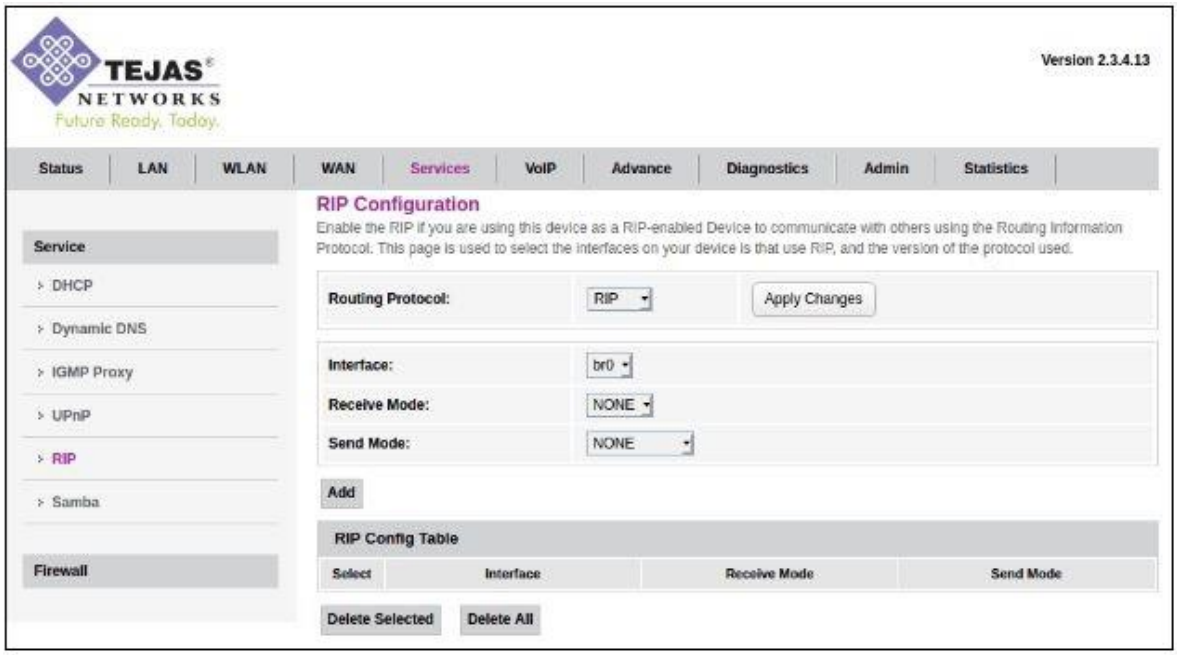
Table 25: UPnP configuration parameters

Parameter	Description
UPnP	Allows you to enable or disable UPnP by selecting the desired radio button.
WAN Interface	Allows you to select the WAN interface from the drop down menu.

RIP (Routing protocol)

Go to **Service->RIP** in the navigation pane. **RIP Configuration** page is displayed. Enable the RIP if you are using this device as RIP-enabled device to communicate with others using the Routing Information Protocol. This page is used to select the interfaces on your device, and the version of the protocol used.

Figure 28: RIP Configuration



Enter the desired values by referring to **RIP configuration parameters** table and click on **Add** button.

Table 26: RIP configuration parameters

Parameter	Description
Routing Protocol	Allows you to select the RIP protocol from the drop down menu. • Disable • RIP
Following parameters are displayed only when **Routing Protocol** is selected as 'RIP'.	
Interface	Allows you to select the interface from the drop down menu.
Receive Mode	Allows you to select the receive mode from the drop down menu. • NONE • RIP1 • RIP2 • Both
Send Mode	Allows you to select the send mode from the drop down menu. • NONE • RIP1 • RIP2 • RIP1 COMPAT
RIP Config Table	This table lists the interfaces configured with RIP. Select the check box against the desired interface for deletion and click on **Delete Selected** button. To delete all configured interfaces on the pane, click on **Delete All** button. Check box against all interfaces on the page will get selected and will be deleted.

Samba

Go to **Service->Samba** in the navigation pane. **Samba** page is displayed. This page lets the user to configure Samba. Samba is a popular application that allows end users to access and use files, printers, and other commonly shared resources on a company's intranet or on the Internet.

Figure 29: Samba

Enter the desired values by referring to **Samba configuration parameters** table and click on **Apply Changes** button to save the changes.

Table 27: Samba configuration parameters

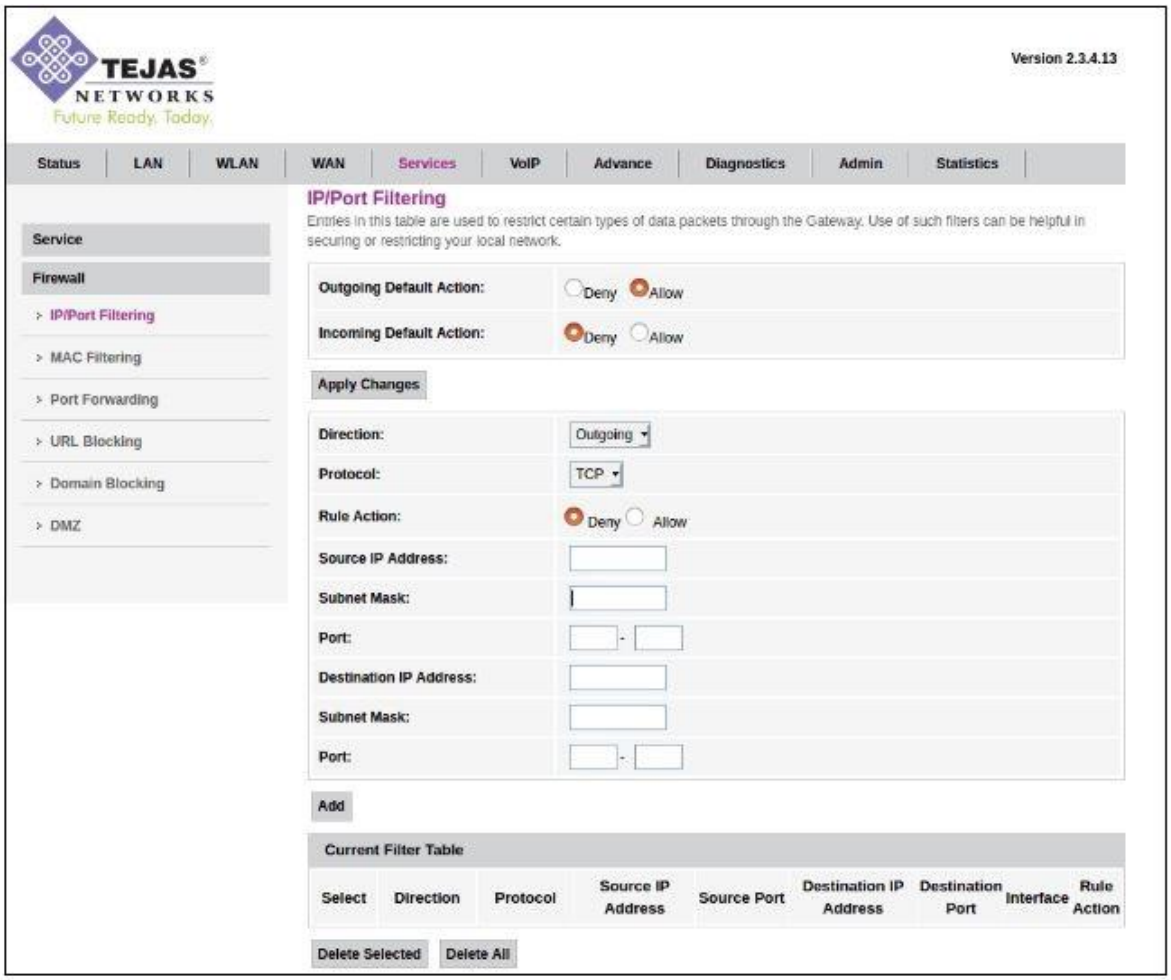
Parameter	Description
Samba	Allows you to enable or disable Samba by selecting the desired radio button.
NetBIOS Name	Enter the NetBIOS (Network Basic Input/Output System) name in the text box provided.
Server String	Enter the server string in the text box provided.

Firewall

IP/Port Filtering

Go to **Firewall-> IP/Port Filtering** in the navigation pane. **IP/Port Filtering** page is displayed.

Figure 30: IP/Port Filtering



Enter the desired values by referring to **IP/Port Filtering parameters** table and click on **Add** button.

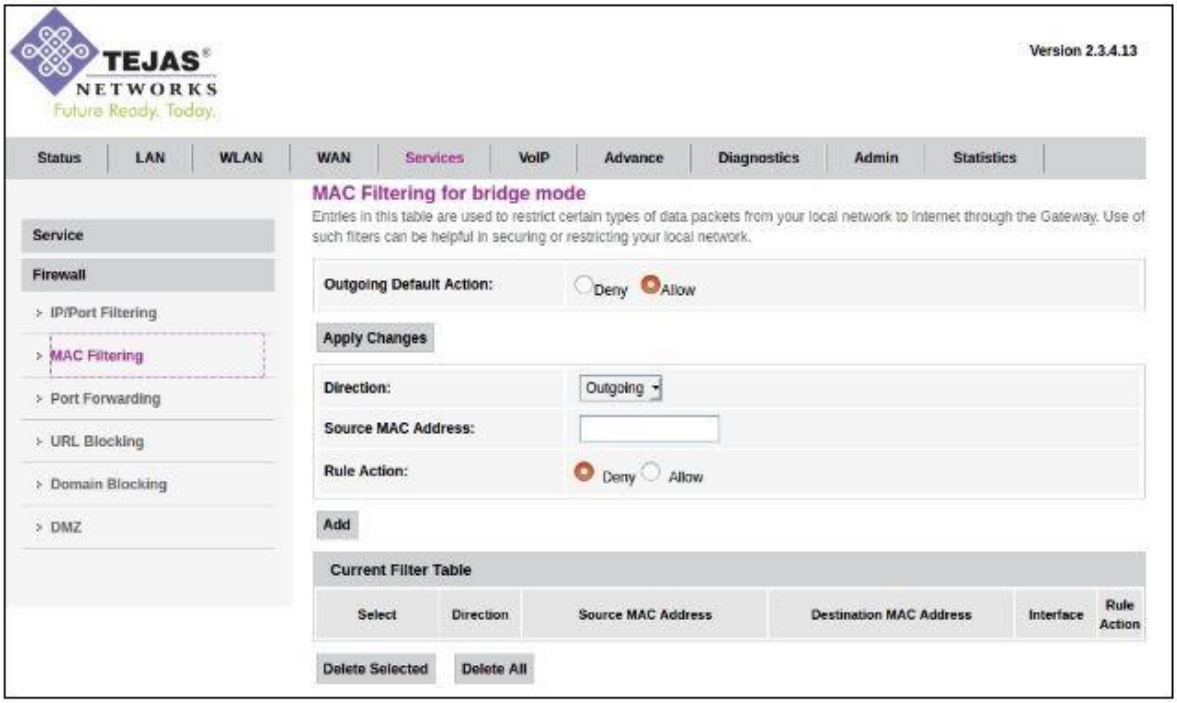
Table 28: IP/Port Filtering parameters

Parameter	Description
Outgoing Default Action	Allows you to 'Deny' or 'Allow' outgoing default action by selecting the desired radio button.
Incoming Default Action	Allows you to 'Deny' or 'Allow' incoming default action by selecting the desired radio button.
Direction	Select the direction of the port from the drop down menu. • Outgoing • Incoming
Protocol	Select the protocol to be used from the drop down menu. • TCP • UDP • ICMP
Rule Action	Allows you to 'Deny' or 'Allow' rule action by selecting the desired radio button.
Source IP Address	Enter the source IP address in the text box provided.
Subnet Mask	Enter the source subnet mask in the text box provided.
Port	Enter the source port in the text box provided.
Destination IP Address	Enter the destination IP address in the text box provided.
Subnet Mask	Enter the destination subnet mask in the text box provided.
Port	Enter the destination port in the text box provided.
Current Filter Table	Entries in this table are used to restrict certain types of data packets through the Gateway. Use of such filters can be helpful in securing or restricting your local network. Select the check box against the desired interface for deletion and click on **Delete Selected** button. To delete all configured interfaces on the pane, click on **Delete All** button. Check box against all interfaces on the page will get selected and will be deleted.

MAC Filtering

Go to **Firewall-> MAC Filtering** in the navigation pane. **MAC Filtering for bridge mode** page is displayed.

Figure 31: MAC Filtering for bridge mode



Enter the desired values by referring to **MAC Filtering parameters** table and click on **Add** button.

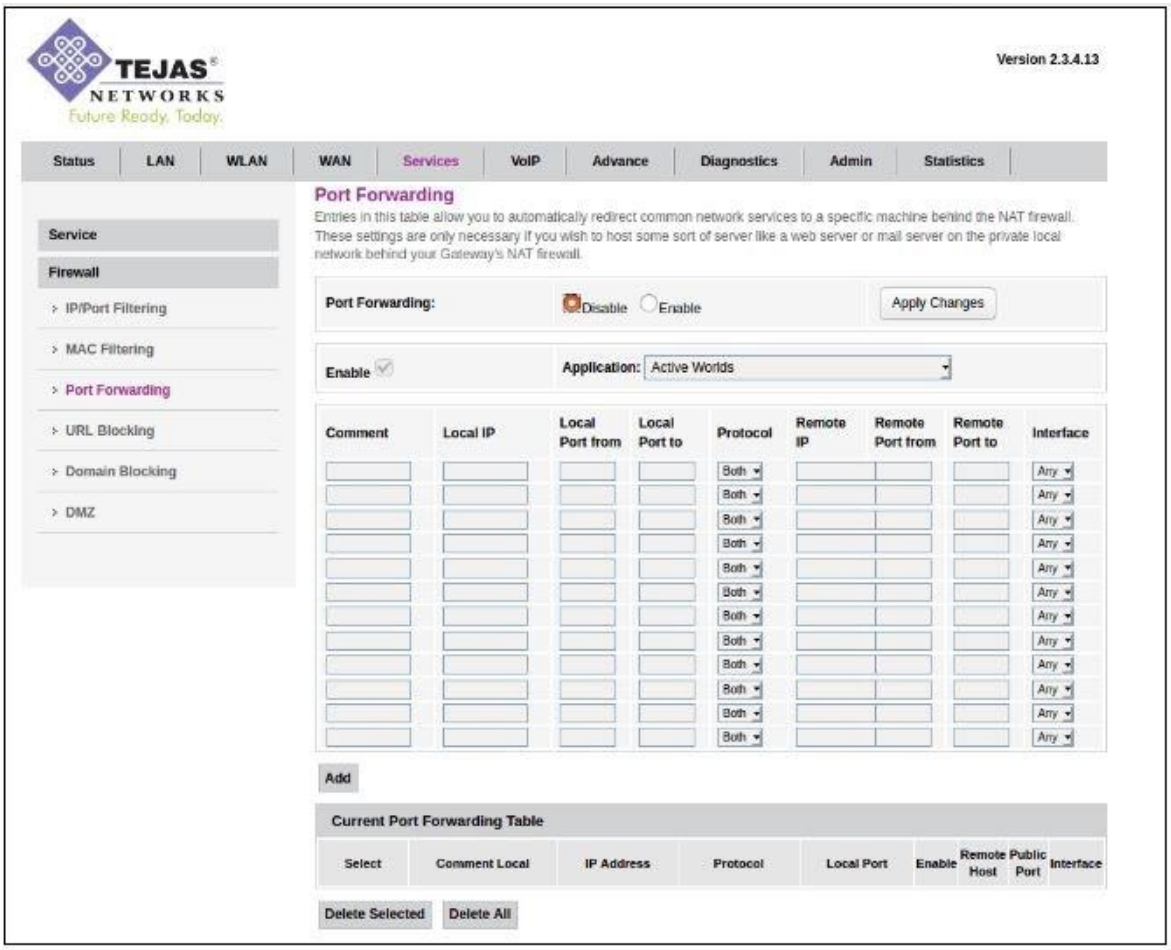
Table 29: MAC Filtering parameters

Parameter	Description
Outgoing Default Action	Allows you to 'Deny' or 'Allow' outgoing default action by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
Direction	Select the direction of the port from the drop down menu. • Outgoing • Incoming
Source MAC Address	Enter the source MAC address in the text box provided.
Rule Action	Allows you to 'Deny' or 'Allow' rule action by selecting the desired radio button.
Current Filter Table	Entries in this table are used to restrict certain types of data packets from the local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network. Select the check box against the desired interface for deletion and click on **Delete Selected** button. To delete all configured interfaces on the pane, click on **Delete All** button. Check box against all interfaces on the page will get selected and will be deleted.

Port Forwarding

Go to **Firewall-> Port Forwarding** in the navigation pane. **Port Forwarding** page is displayed.

Figure 32: Port Forwarding



Enter the desired values by referring to **Port Forwarding parameters** table and click on **Add** button.

Table 30: Port Forwarding parameters

Parameter	Description
Port Forwarding	Allows you to enable or disable port forwarding by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
Following parameters are displayed only when **Port Forwarding** is set as 'Enable'.	
Enable	Allows you to select the check box to enable the application.
Application	Allows you to select the desired application from the drop down menu.
Comment	Enter the comments in the text box provided.
Local IP	Enter the local IP address in the text box provided.
Local Port from	Enter the source port number of the local port.
Local Port to	Enter the destination port number of the local port.
Protocol	Select the desired protocol from the drop down menu. • Both • TCP • UDP
Remote IP	Enter the remote IP address in the text box provided.
Remote Port from	Enter the source port number of the remote port.
Remote Port to	Enter the destination port number of the remote port.
Interface	Select the interface from the drop down menu.
Current Port Forwarding Table	Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall. These entries are only necessary if you wish to host some sort of server like a web browser or mail server on a private local network behind your Gateway's NAT firewall. Select the check box against the desired interface for deletion and click on **Delete Selected** button. To delete all configured interfaces on the pane, click on **Delete All** button. Check box against all interfaces on the page will get selected and will be deleted.

URL Blocking

Go to **Firewall-> URL Blocking** in the navigation pane. **URL Blocking** page is displayed. This page is used to configure the blocked FQDN and filtered keyword.

Figure 33: URL Blocking

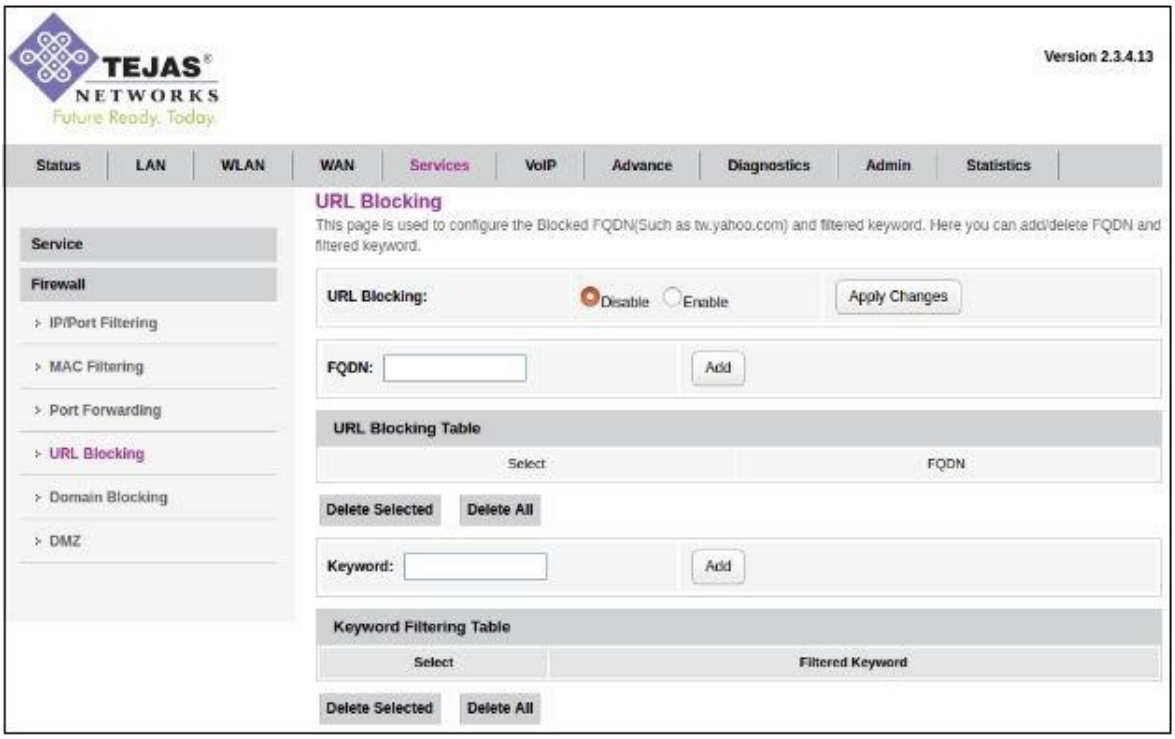


Table 31: URL Blocking parameters

Parameter	Description
Port Forwarding	Allows you to enable or disable port forwarding by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
FQDN	Enter the FQDN (Fully Qualified Domain Name) in the text box provided and click on **Add** button.
URL Blocking Table	This table lists the FQDN configured. Select the check box against the desired FQDN for deletion and click on **Delete Selected** button. To delete all configured FQDNs on the pane, click on **Delete All** button. Check box against all FQDNs on the page will get selected and will be deleted.
Keyword Filtering Table	This table lists the filtered keywords. Select the check box against the desired filtered keyword for deletion and click on **Delete Selected** button. To delete all filtered keywords on the pane, click on **Delete All** button. Check box against all filtered keywords on the page will get selected and will be deleted.

Domain Blocking

Go to **Firewall-> Domain Blocking** in the navigation pane. **Domain Blocking Configuration** page is displayed. This page is used to configure the Blocked Domain.

Figure 34: Domain Blocking Configuration

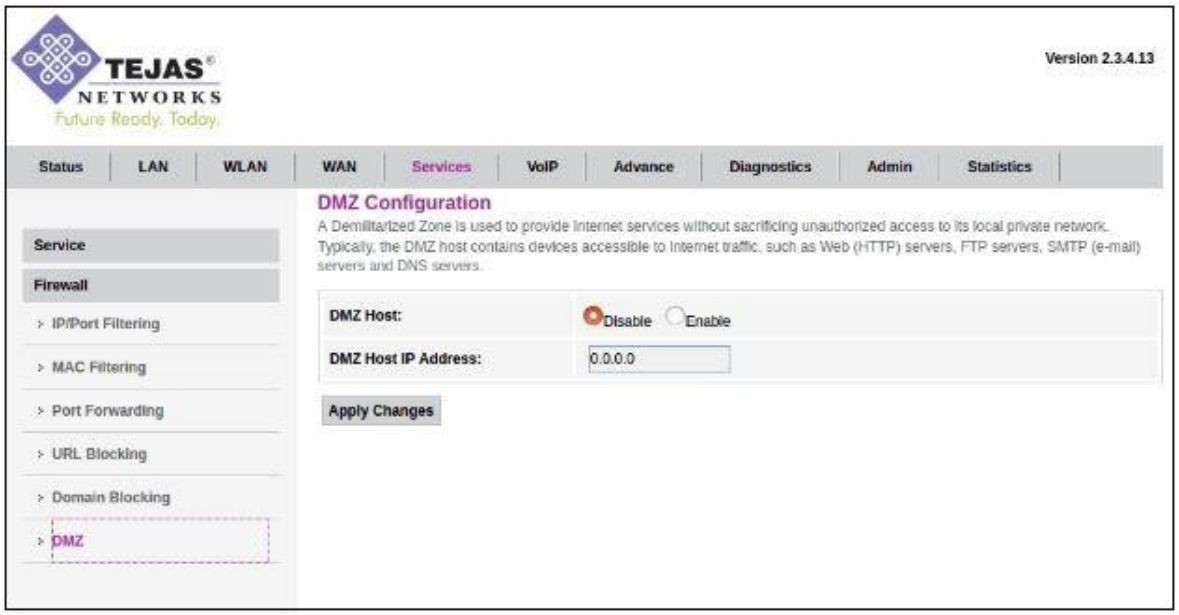
Table 32: Domain Blocking parameters

Parameter	Description
Domain Blocking	Allows you to enable or disable domain blocking by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
Domain	Enter the domain in the text box provided and click on **Add** button.
Domain Blocking Configuration	This table lists the domain configured. Select the check box against the desired domain for deletion and click on **Delete Selected** button. To delete all configured domains on the pane, click on **Delete All** button. Check box against all domains on the page will get selected and will be deleted.

DMZ (De-Militarized zone)

Go to **Firewall-> DMZ** in the navigation pane. **DMZ Configuration** page is displayed. A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic such as Web (HHTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.

Figure 35: DMZ Configuration



Enter the desired values by referring to **DMZ configuration parameters** table and click on **Apply Changes** button to save the changes.

Table 33: DMZ configuration parameters

Parameter	Description
DMZ Host	Allows you to enable or disable DMZ host.
DMZ Host IP Address	Enter the DMZ IP address in the text box provided.

VoIP

This section details the VoIP related configurations.

Go to **VoIP-> Port1/Port2** in the navigation pane.

Figure 36: VoIP Port

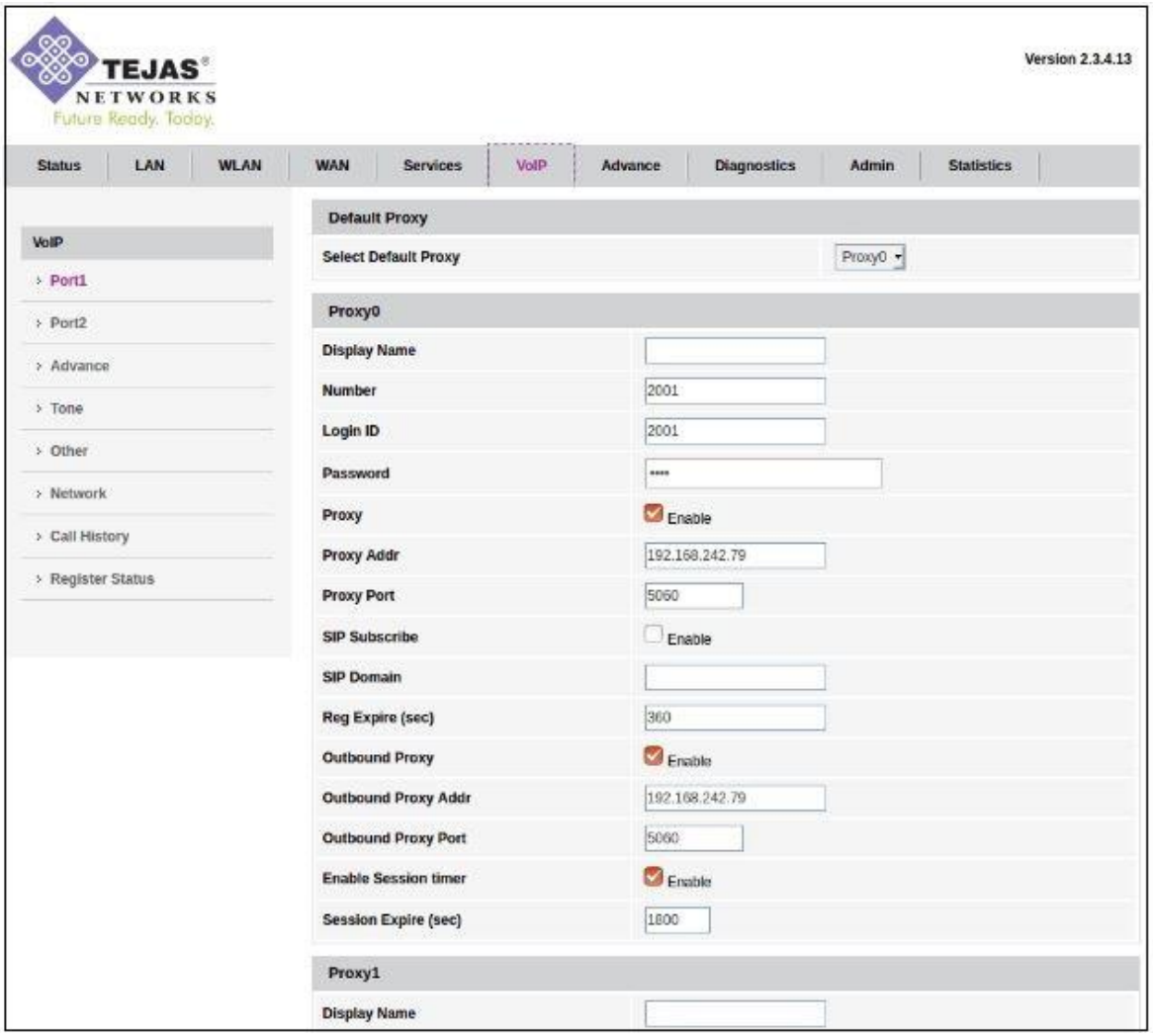


Table 34: VoIP parameters

Parameters	Description
Default Proxy	
Select Default Proxy	Select the proxy server from the drop down menu.
Proxy 0/Proxy 1	
Display Name	Allows you to enter the name of the proxy server.
Number	Enter the number of the proxy server.
Login ID	Enter the login identifier of the proxy server.
Password	Enter the password in the text box provided.
Proxy	Allows you to select the check box to enable proxy server.
Proxy Addr	Allows you to enter the SIP server IP address.
Proxy Port	Enter the proxy port in the text box provided.
SIP Subscribe	Allows you to select the check box to enable SIP subscribe.
SIP Domain	Enter the SIP domain in the text box provided.
Reg Expire (sec)	Allows you to enter the registration expiry time in seconds.
Outbound Proxy	Allows you to select the check box to enable outbound proxy.
Outbound Proxy Addr	Allows you to enter the outbound proxy address.
Outbound Proxy Port	Enter the outbound proxy port in the text box provided.
Enable Session timer	Allows you to select the check box to enable session timer.
Session Expire (sec)	Allows you to enter the session expiry time in seconds.

VoIP-Advance

Go to **VoIP-> Advance** in the navigation pane.

Figure 37: VoIP Advance

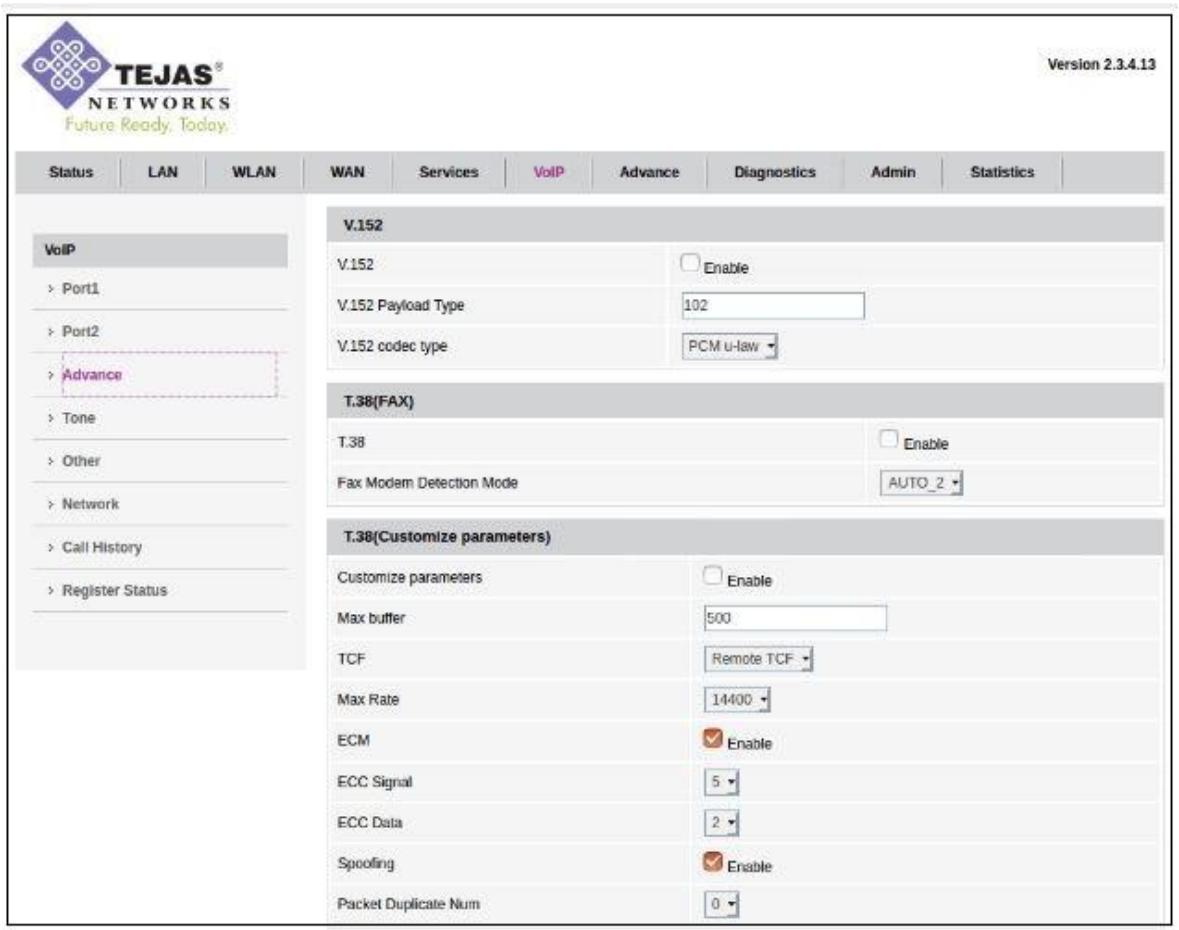


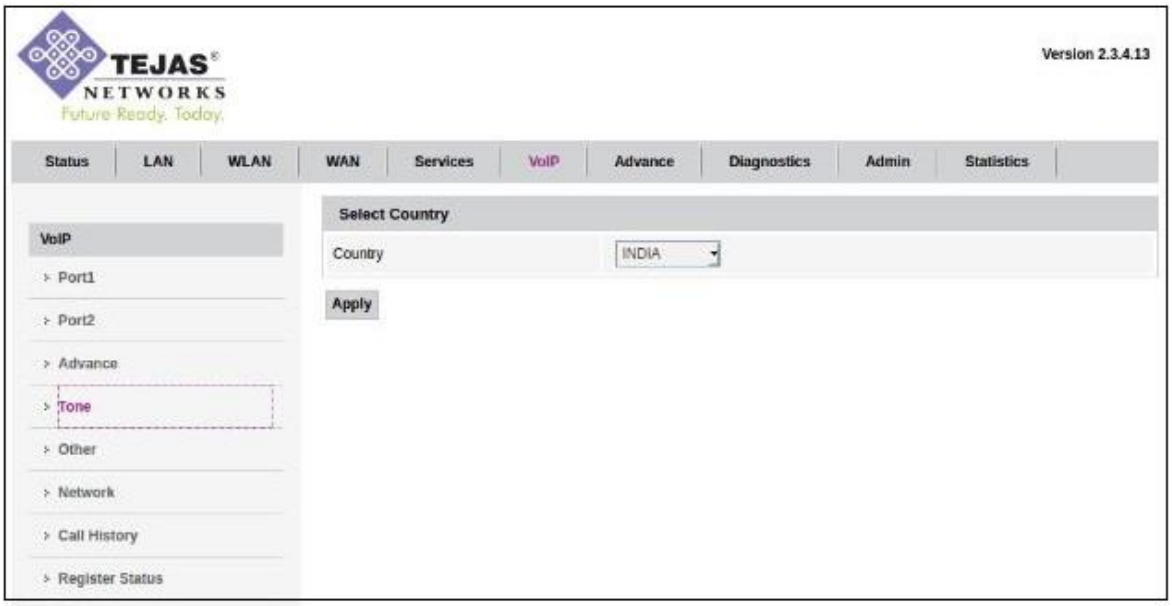
Table 35: VoIP parameters

Parameters	Description
V.152	
V.152	Allows you to select the check box to enable ITU-T V.152 mode.
V.152 Payload Type	Allows you to enter the payload for ITU-T V.152 mode.
V.152 codec type	Allows you to enter the codec type for ITU-T V.152 mode in the drop down menu.
T.38 (FAX)	
T.38	Allows you to select the check box to enable ITU-T T.38 fax mode.
Fax Modem Detection Mode	Allows you to select the fax detection mode from the drop down menu.
T.38 (Customize parameters)	
Customize parameters	Allows you to select the check box to enable customize parameters for ITU-T T.38 fax mode.
Max buffer	Allows you to enter the maximum buffer in the text box provided.
TCF	Allows you to select the TCF mode from the drop down menu.
Max Rate	Allows you to enter the maximum rate in the text box provided.
ECM	Allows you to select the check box to enable ECM.
ECC Signal	Allows to select the ECC (Error correction code) signal from the drop down menu.
ECC Data	Allows to select the ECC (Error correction code) data from the drop down menu.
Spoofing	Allows you to select the check box to enable spoofing.
Packet Duplicate Num	Allows you to select the duplicate number of the packet from the drop down menu.

Tone

Go to **VoIP-> Tone** in the navigation pane. Select the country in the drop down menu and click **Apply** button. This is used for selecting tones used in VoIP.

Figure 38: Tone



Other

Go to **VoIP-> Other** in the navigation pane.

Figure 39: VoIP Other

Table 36: VoIP- Other parameters

Parameters	Description
Dial Option	
Auto Dial Time	Allows you to set the auto dial time. Acceptable range is 3 seconds to 9 seconds. By default, it will be set to 0.
Dial-out by Hash Key	Allows you to enable or disable Dial-out by Hash Key feature.
Off-Hook Alarm	
Off-Hook Alarm Time	Allows you to set the off-hook alarm time. Acceptable range is 10 to 60 seconds. By default, it will be set to 0.
FXS Pulse Dial Detection	Allows you to select the radio button to enable or disable FXS Pulse Dial Detection feature.
Interdigit Pause Duration	Enter the interdigit pause duration in milliseconds.
SIP Setting	
SIP Prack	Allows you to enable or disable SIP Prack feature.
SIP Server Redundancy	Allows you to enable or disable SIP redundancy feature.
SIP CLIR anonymous from header	Allows you to enable or disable SIP CLIR feature. CLIR will represent the caller ID was restricted from display.
Non-SIP INBOX call	Allows you to enable or disable Non- SIP INBOX call feature.
Hook Flash Relay setting	Allows you to set the Hook Flash Relay mode from the drop down menu.
SIP Min-SE	Enter the minimum SIP time in seconds.
user=phone	Allows you to enable user=phone feature.
SIP OPTIONS	
Options Interval Time	Enter the options interval time in seconds.

Network

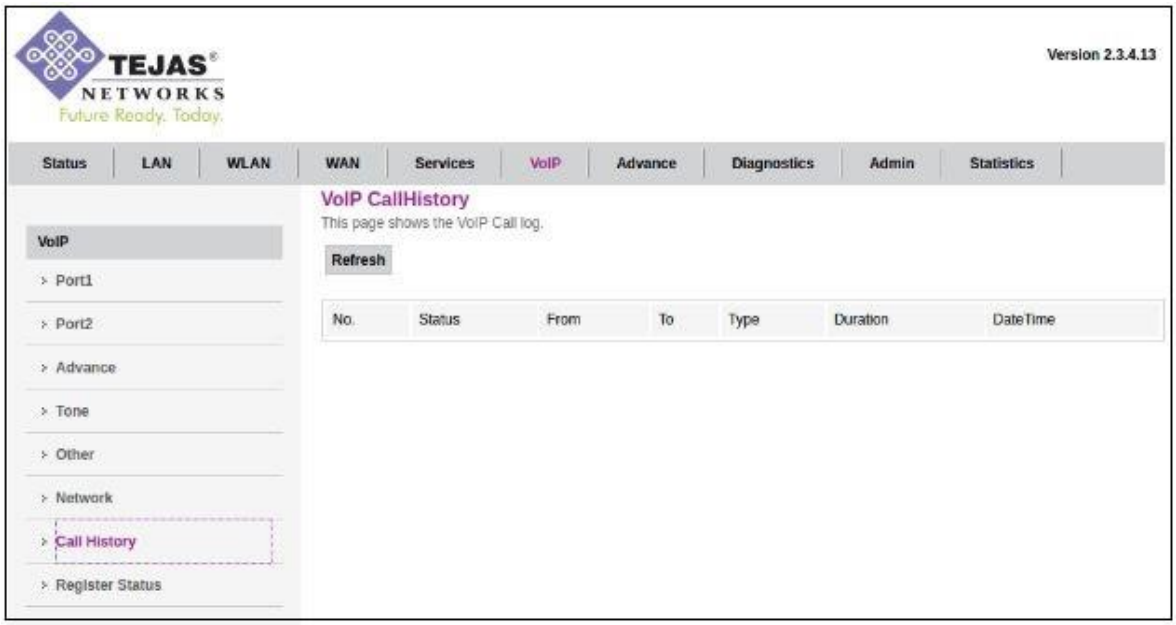
Go to **VoIP-> Network** in the navigation pane. Select the VoIP interface from the drop down menu. Enter the **SIP DSCP** and **RTP DSCP** values within the range of 0-63 and click on **Apply** button.

Figure 40: Network

Call History

Go to **VoIP-> Call History** in the navigation pane. This page shows the VoIP call log with the details of status, duration of call, date and time, etc.

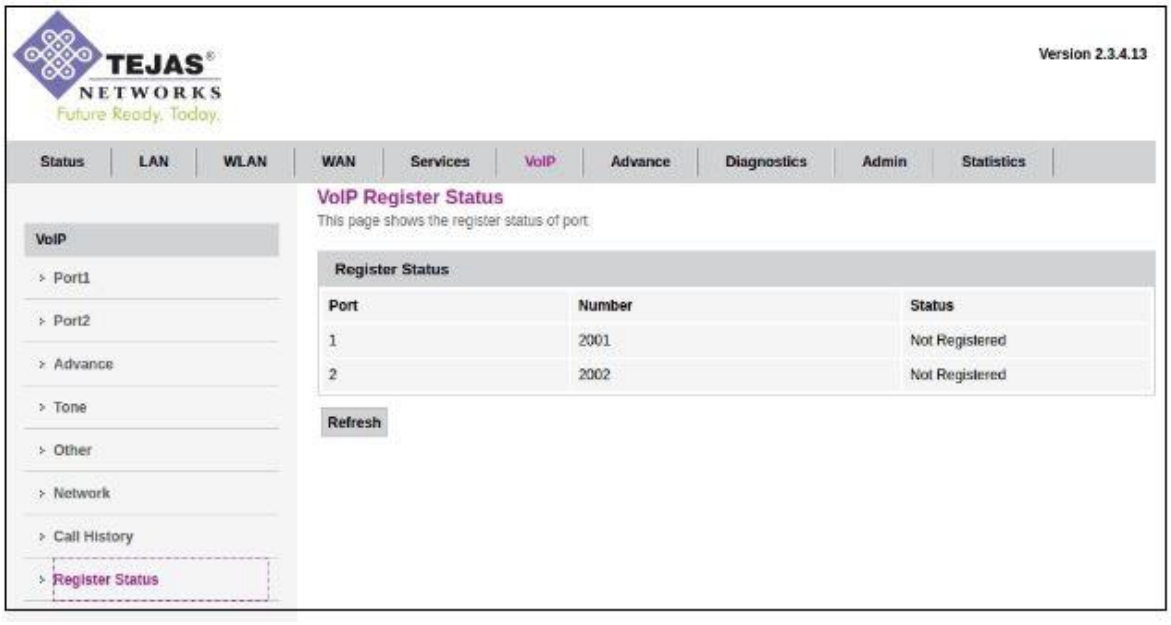
Figure 41: Call History



Register Status

Go to **VoIP-> Register Status** in the navigation pane. **VoIP Register Status** page is displayed. This page shows the register status of the POTS phone with SIP server.

Figure 42: Register Status



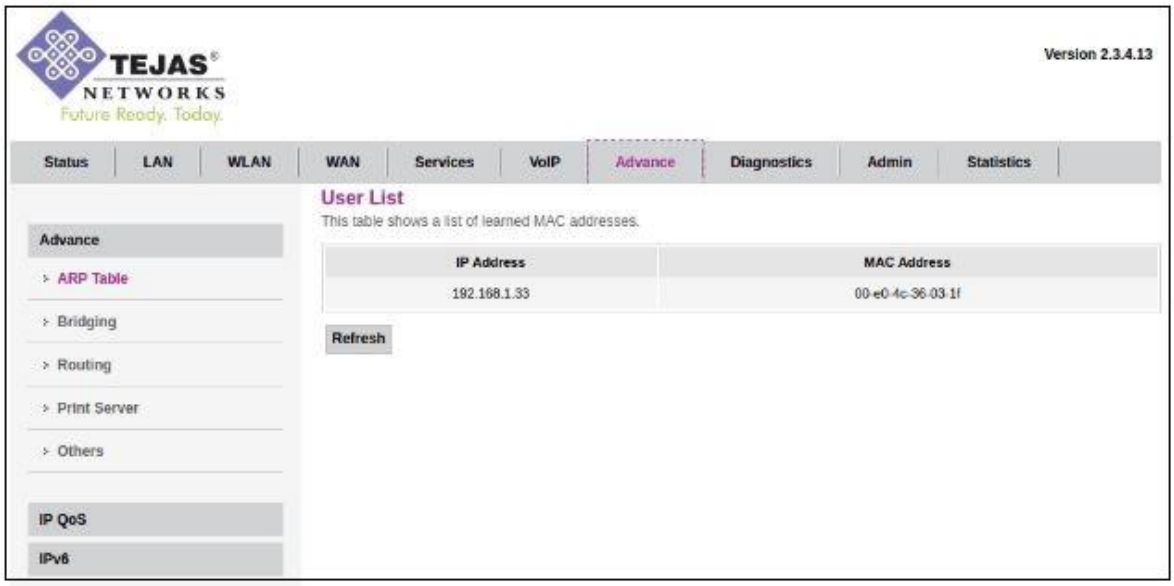
Advance

This section details the advance operations that can be performed in UI.

ARP Table

Go to **Advance-> ARP Table** in the navigation pane. **User List** page is displayed. This table shows the list of learned MAC addresses.

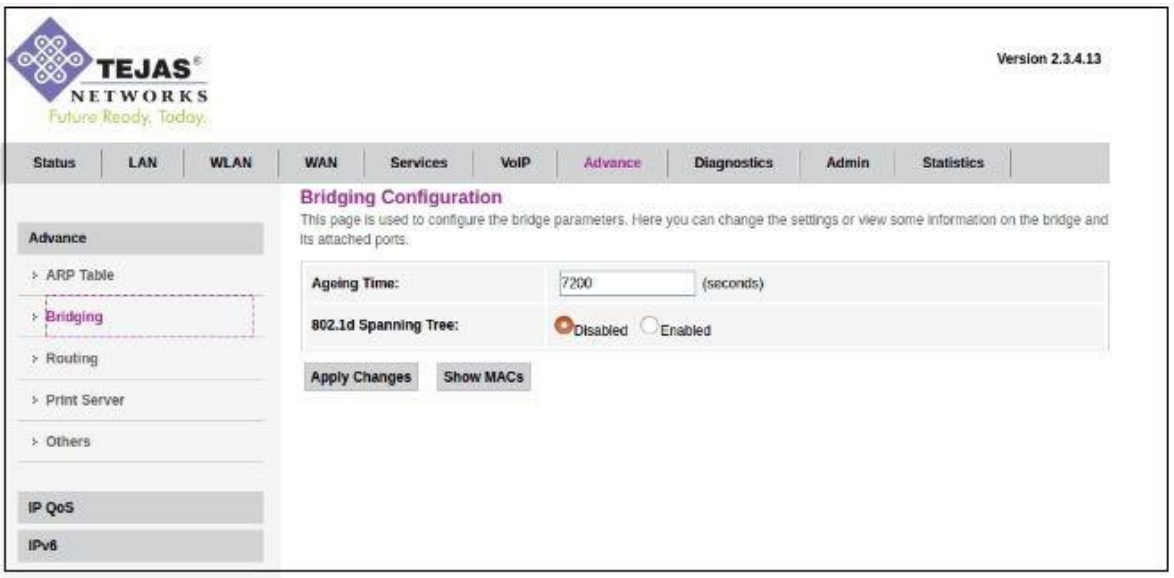
Figure 43: ARP Table



Bridging

Go to **Advance-> Bridging** in the navigation pane. **Bridging Configuration** page is displayed. This page is used to configure the bridge parameters. Here you can change the settings or view some information on the bridge and its attached ports.

Figure 44: Bridging



Select or enter the desired values by referring to **Bridging configuration parameters** table and click on **Apply Changes** button to save the changes. To show the MAC addresses, click on **Show MACs**.

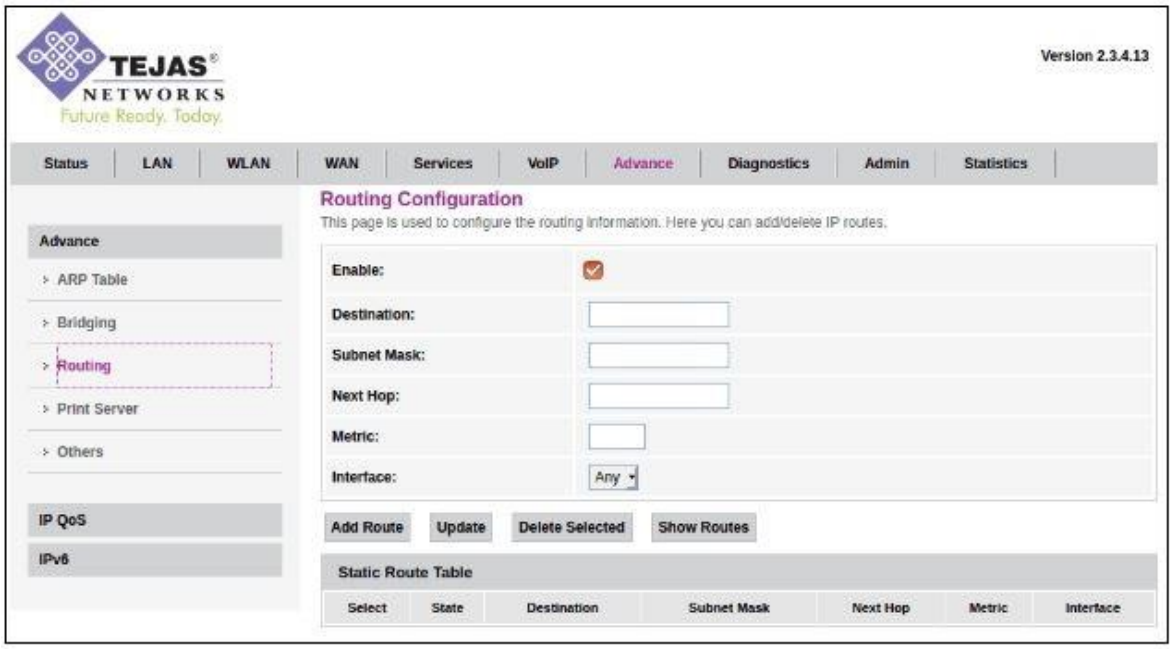
Table 37: Bridging configuration parameters

Parameters	Description
Ageing Time	Enter the ageing time in seconds.
802.1d Spanning Tree	Allows you to enable or disable spanning tree by selecting the desired radio button.

Routing

Go to **Advance-> Routing** in the navigation pane. **Routing Configuration** page is displayed. This page is used to configure the routing information. Here you can add or delete IP routes.

Figure 45: Routing Configuration



Print Server

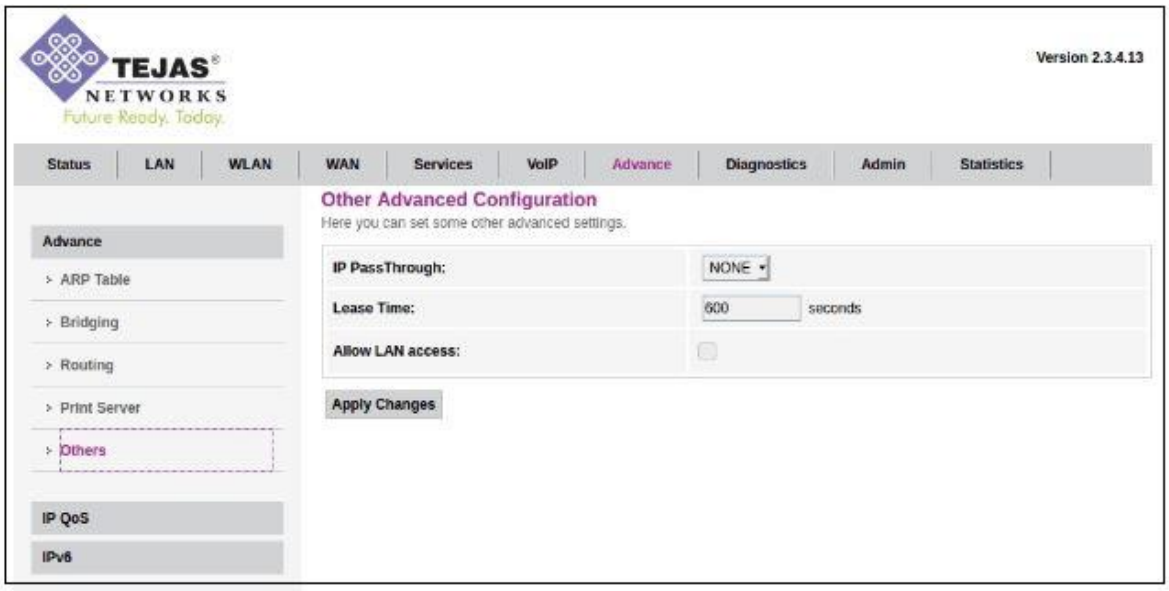
Go to **Advance-> Print Server** in the navigation pane. **Printer URL (s)** page is displayed. This page is used to show printer URL(s).

Figure 46: Print Server

Others

Go to **Advance-> Others** in the navigation pane. **Other Advanced Configuration** page is displayed. Here you can set some other advanced settings.

Figure 47: Others

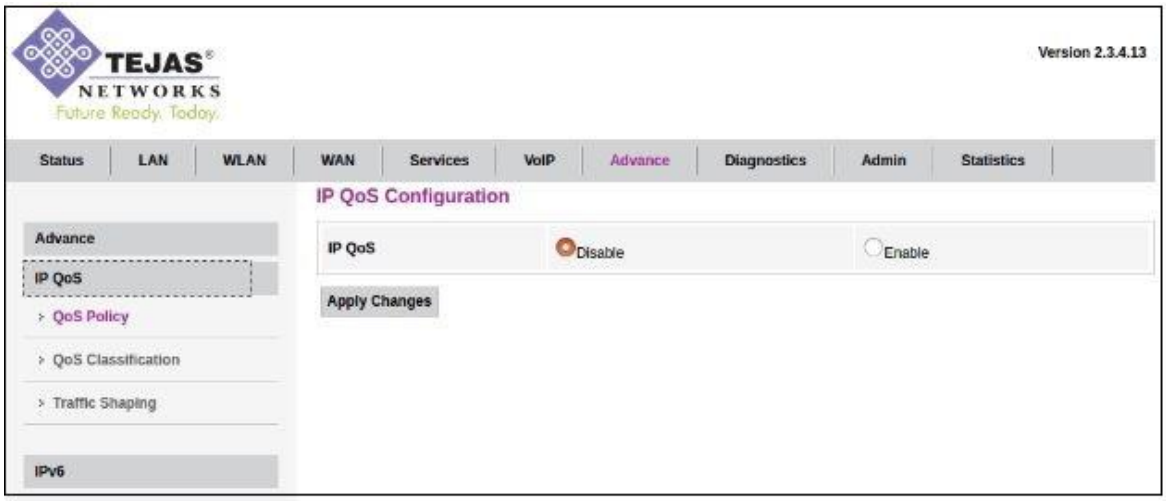


IP QoS

QoS Policy

Go to **IP QoS-> QoS Policy** in the navigation pane. **IP QoS Configuration** page is displayed. Enable or disable IP QoS by selecting the desired radio button and click on **Apply Changes** button.

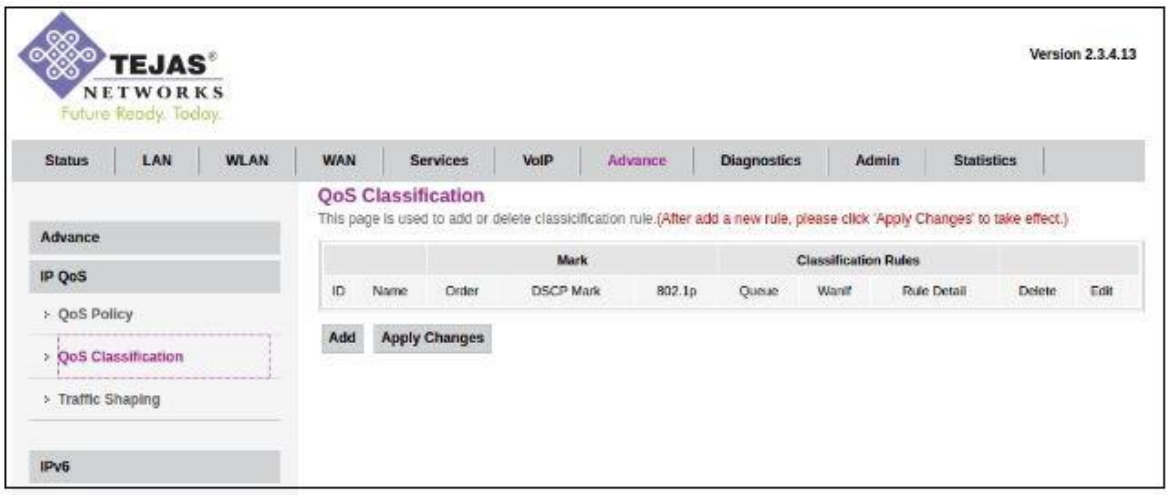
Figure 48: IP QoS Configuration



QoS Classification

Go to **IP QoS-> QoS Classification** in the navigation pane. **QoS Classification** page is displayed. This page is used to add or delete classification rule. Once added a new rule, please click **Apply Changes** button to take effect.

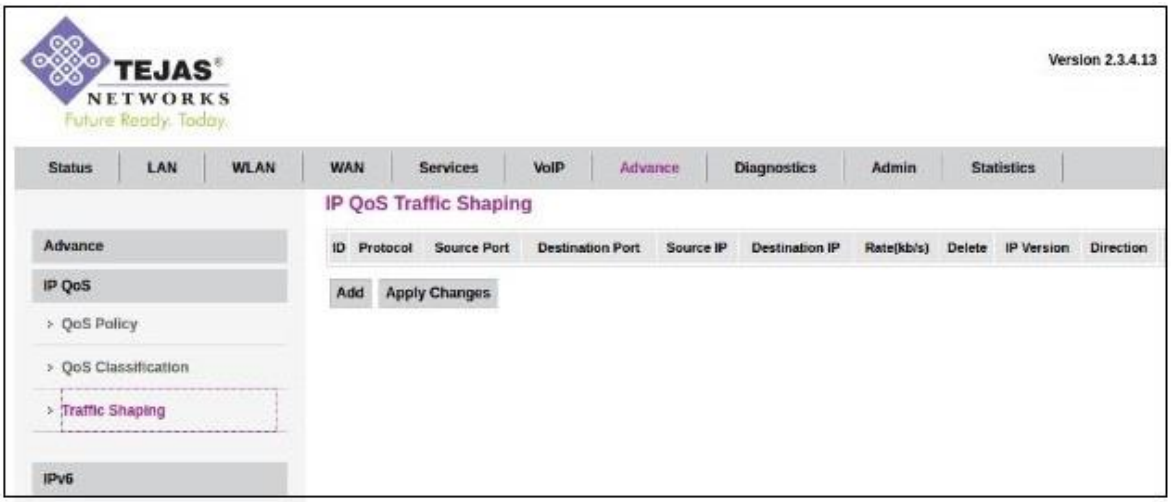
Figure 49: QoS Classification



Traffic Shaping

Go to **IP QoS-> Traffic Shaping** in the navigation pane. **IP QoS Traffic Shaping** page is displayed.

Figure 50: Traffic Shaping

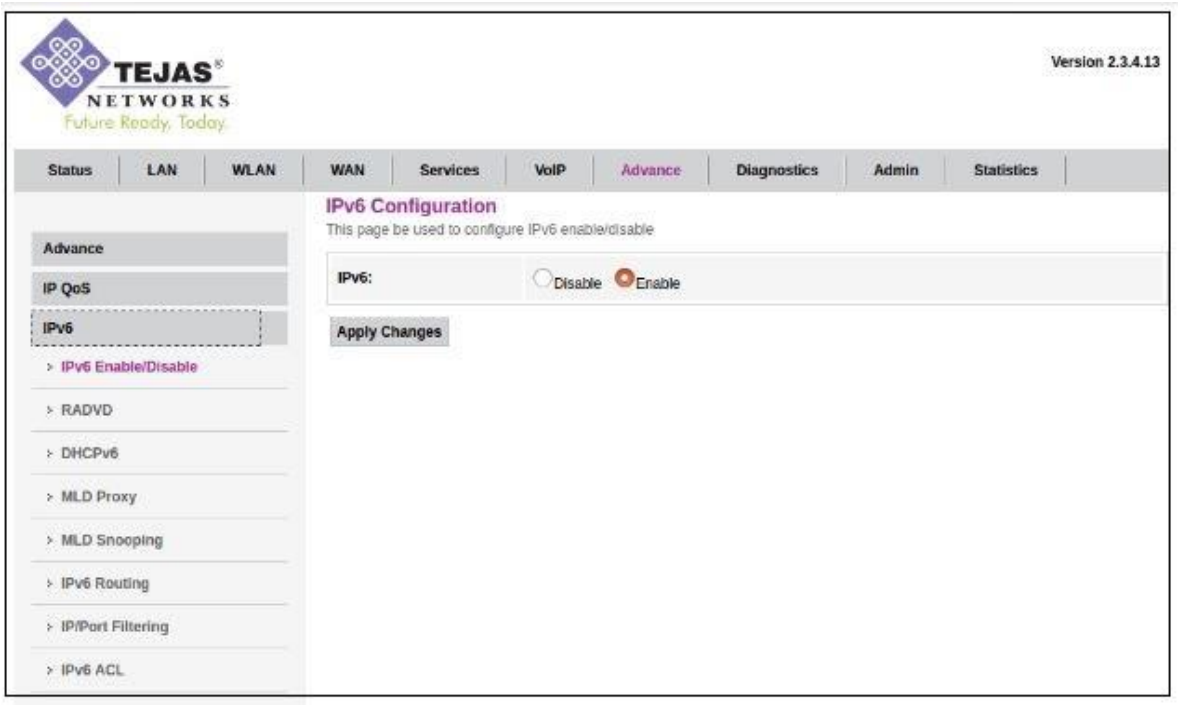


IPv6

IPv6 Enable/Disable

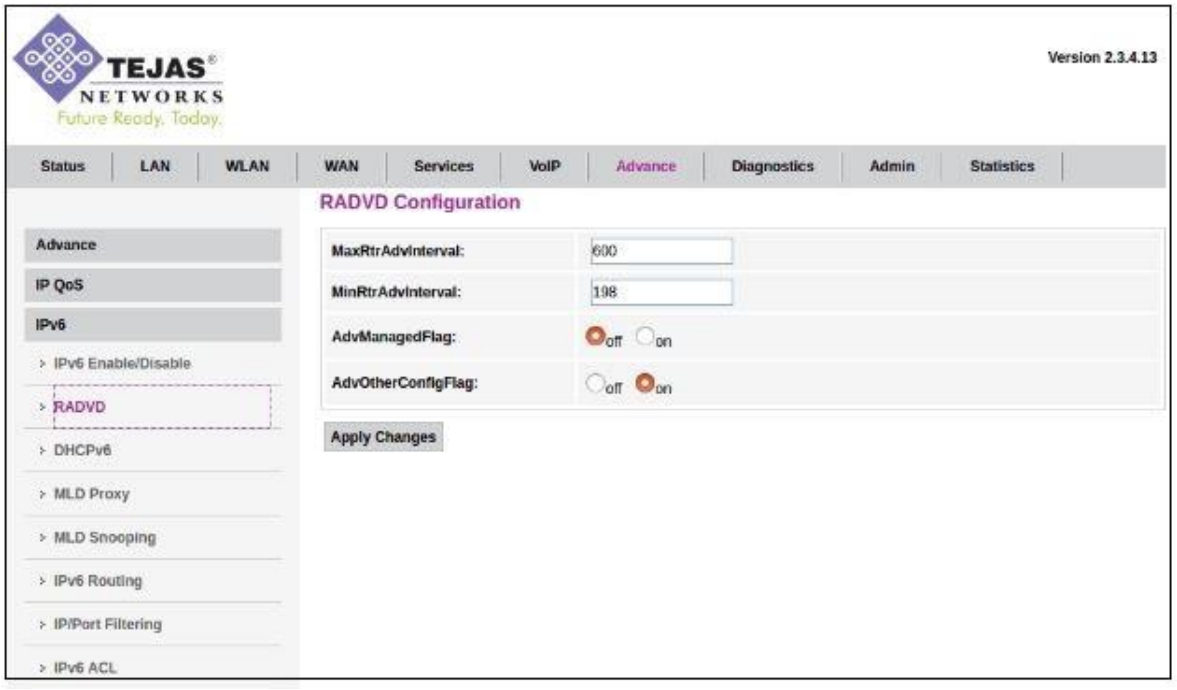
Go to **IPv6-> IPv6 Enable/Disable** in the navigation pane. **IPv6 Configuration** page is displayed. Enable or disable IPv6 by selecting the desired radio button and click on **Apply Changes** button.

Figure 51: IPv6 Configuration



RADVD

Go to **IPv6-> RADVD** in the navigation pane. **RADVD Configuration** page is displayed.



Select or enter the desired values by referring to **RADVD configuration parameters** table and click on **Apply Changes** button to save the changes.

Table 38: RADVD configuration parameters

Parameter	Description
MaxRtrAdvInterval	Enter the maximum router advertisement interval.
MinRtrAdvInterval	Enter the minimum router advertisement interval.
AdvManagedFlag	Allows you to enable AdvManagedFlag by selecting the desired radio button.
AdvOtherConfigFlag	Allows you to enable AdvOtherConfigFlag by selecting the desired radio button.

DHCPv6

Go to **IPv6-> DHCPv6** in the navigation pane. DHCPv6 Settings page is displayed. This page is used to configure DHCPv6 server and DHCPv6 relay.

Figure 52: DHCPv6

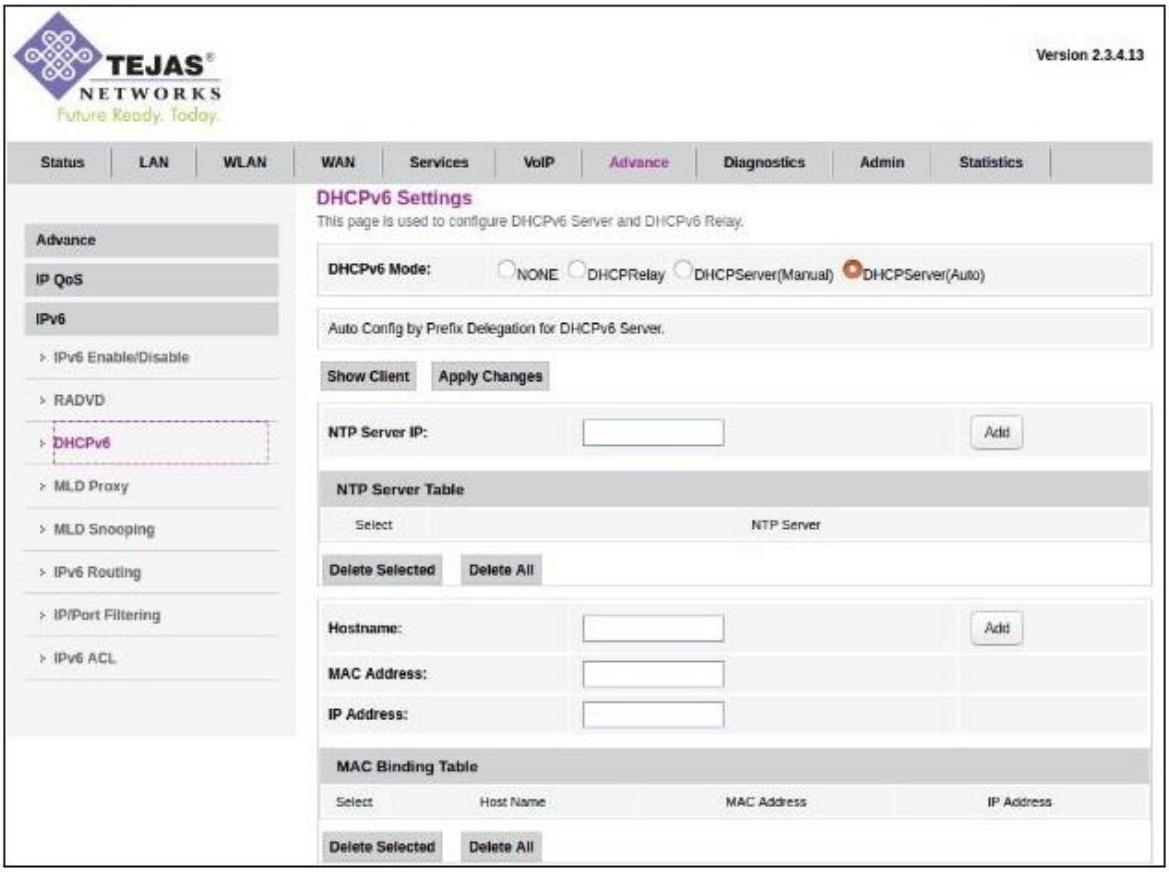


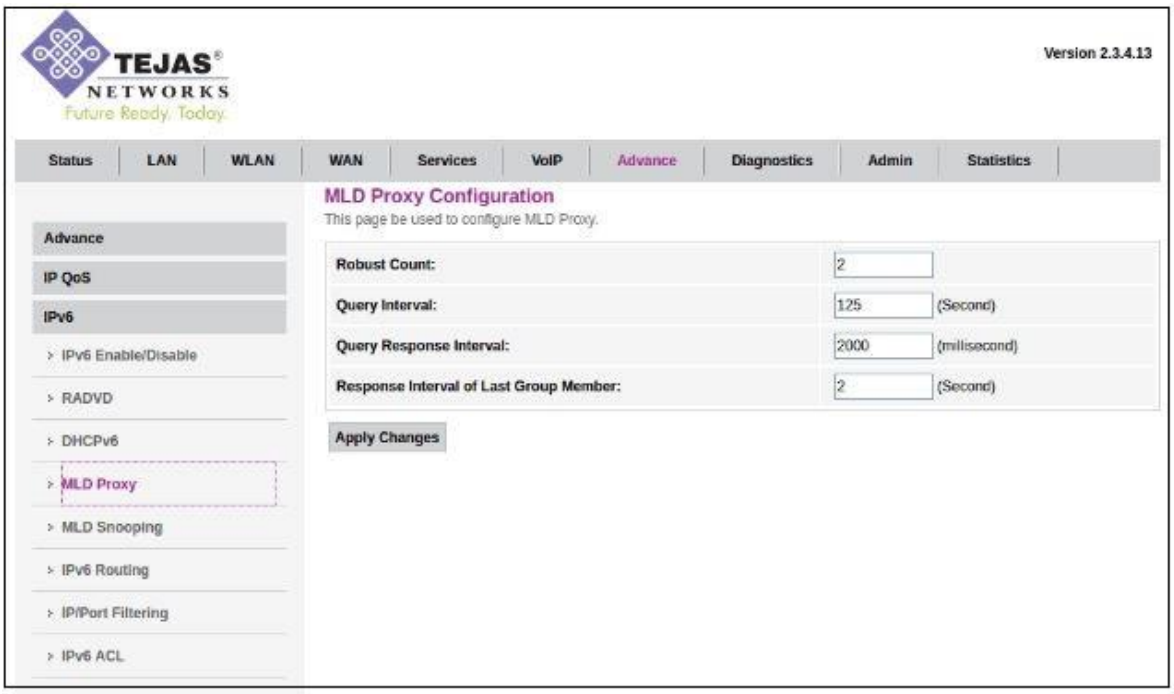
Table 39: DHCP Settings parameters

Parameter	Description
DHCPv6 Mode	Allows you to set the DHCPv6 mode by selecting the radio button against 'DHCP Relay' and 'DHCP Server' and click on **Apply Changes** button. On clicking, **Show Client** button, **Active DHCP Clients** page is displayed that shows the assigned IP address, MAC address and time expired for each DHCP leased client. Following parameters are displayed in **Active DHCP Clients** page: • IP Address • MAC Address • Expired Time (sec) Click **Refresh** button to reload the page. Click **Close** button to close the page.
NTP Server IP	Enter the NTP Server IP details and click on **Add** button.
NTP Server Table	Allows you to select the check box against the desired NTP server for deletion. • To delete all configured NTP server on the pane, click on **Delete All** button. Check box against all NTP servers on the page will get selected and will be deleted. • To delete desired NTP server on the pane, click on **Delete Selected** button and select the check box against the NTP server desired to be deleted.
Host Name	Enter the host name in the text box provided and click on **Add** button.
MAC Address	Enter the MAC address in the text box provided.
IP Address	Enter the IP address in the text box provided.
MAC Binding Table	Allows you to select the check box against the desired MAC address for deletion. • To delete all configured MAC address on the pane, click on **Delete All** button. Check box against all MAC address on the page will get selected and will be deleted. • To delete desired MAC address on the pane, click on **Delete Selected** button and select the check box against the MAC address desired to be deleted.
DNS Relay: This page is used to configure the DHCPv6 Server IP Address for DHCP Relay.	
DHCPv6 Server IP Address	Enter the IP address of the DHCPv6 Server in the text box provided. Click on **Apply Changes** button, to save the changes.

MLD Proxy

Go to **IPv6-> MLD Proxy** in the navigation pane. **MLD Proxy Configuration** page is displayed. This page is used to configure MLD Proxy.

Figure 53: MLD Proxy



Enter the desired values by referring to **MLD Proxy configuration parameters** table and click on **Apply Changes** button to save the changes.

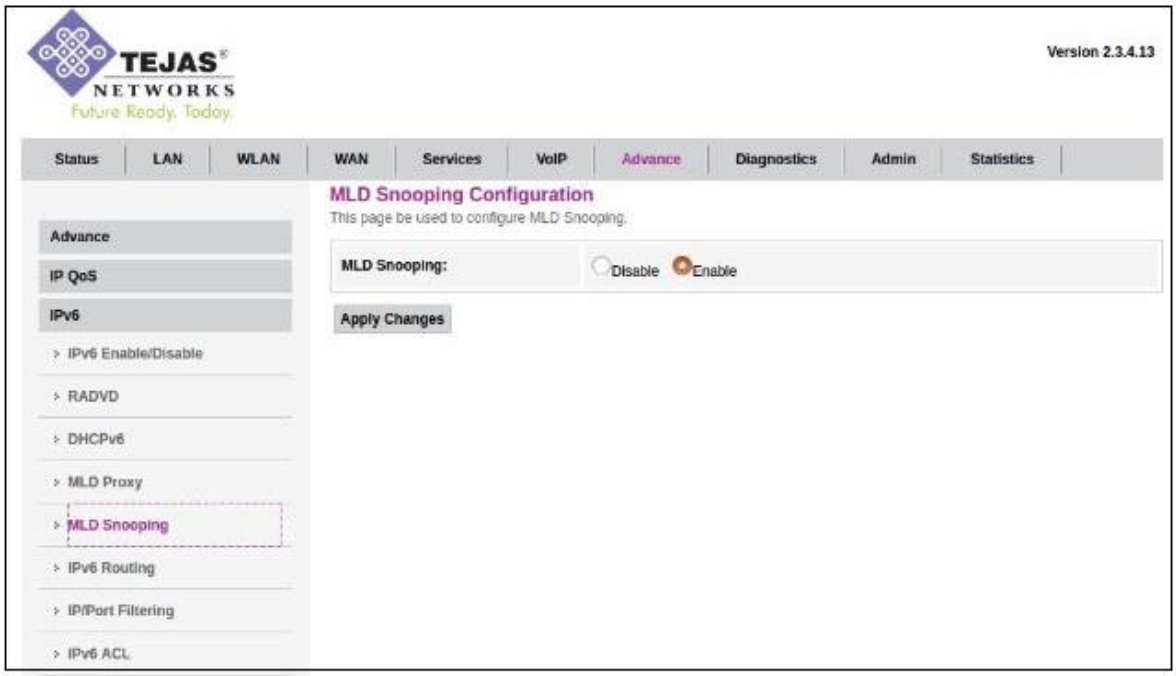
Table 40: MLD Proxy configuration parameters

Parameter	Description
Robust Count	Enter the robust count in the text box provided.
Query Interval	Enter the query interval in seconds.
Query Response Interval	Enter the query response interval in milliseconds.
Response Interval of Last Group Member	Enter the response time of last group member in seconds.

MLD Snooping

Go to **IPv6-> MLD Snooping** in the navigation pane. **MLD Snooping Configuration** page is displayed. This page is used to configure MLD snooping. Enable or disable MLD Snooping by selecting the desired radio button and click on **Apply Changes** button.

Figure 54: MLD Snnoping



IPv6 Routing

Go to **IPv6-> IPv6 Routing** in the navigation pane. **IPv6 Static Routing Configuration** page is displayed. This page is used to configure the IPv6 static routing information. Here you can add or delete static IP routes.

Figure 55: IPv6 Routing

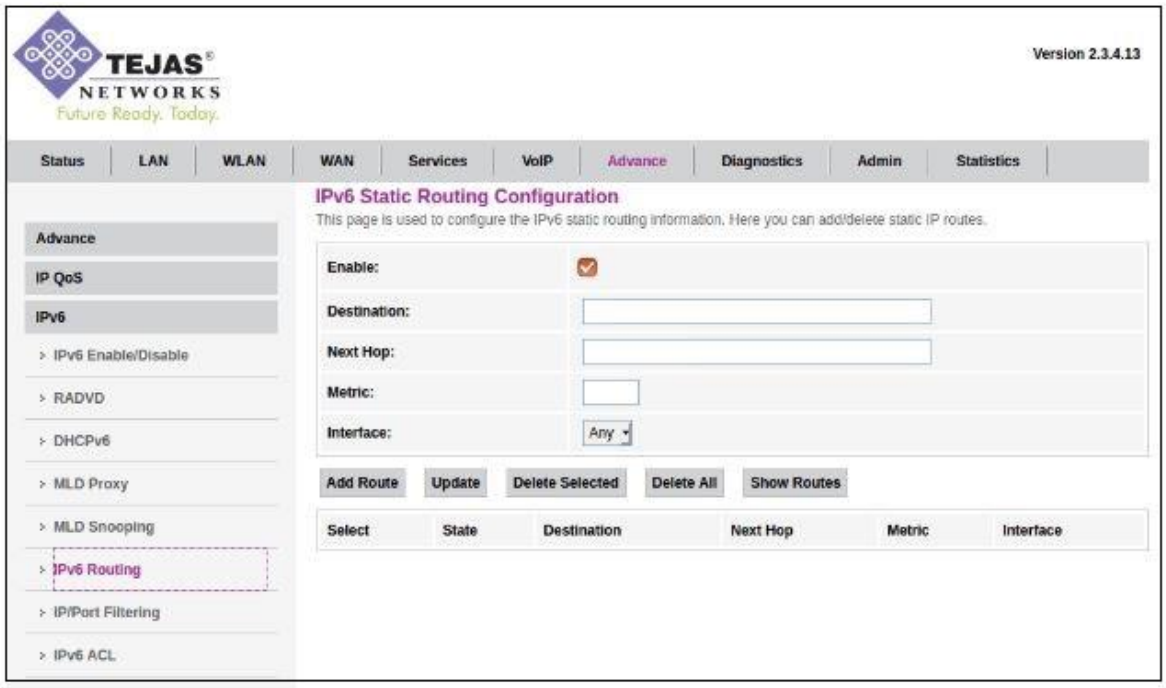


Table 41: IPv6 Routing parameters

Parameter	Description
Enable	Allows you to enable or disable IPv6 routing by selecting the desired radio button.
Destination	Enter the destination address in the text box provided.
Next Hop	Enter the next hop address in the text box provided.
Metric	Enter the metric in the text box provided.
Interface	Select the interface from the drop down menu.

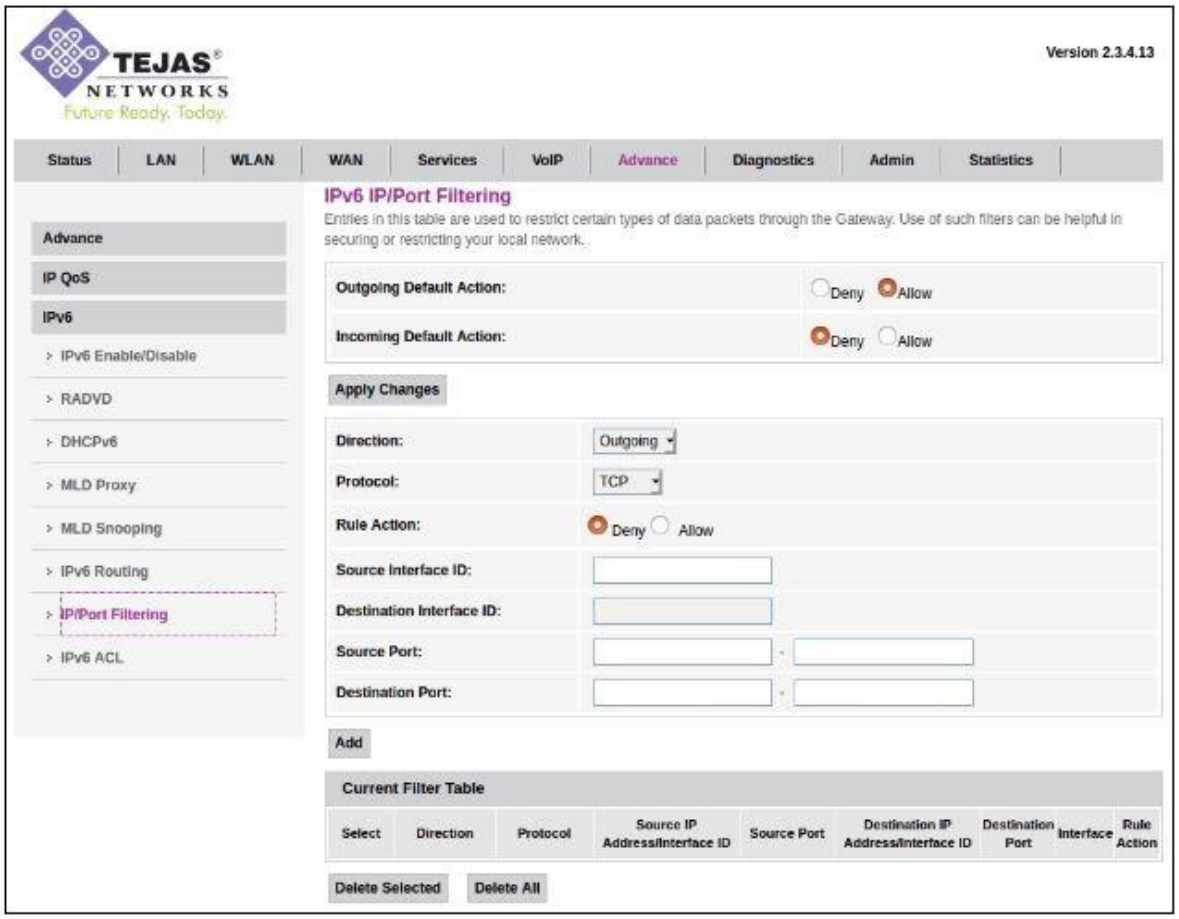
To delete all configured interfaces on the pane, click on **Delete All** button. Check box against interfaces on the page will get selected and will be deleted.

To delete desired interfaces on the pane, click on **Delete Selected** button and select the check box against the interface desired to be deleted.

IP/Port Filtering

Go to **IPv6-> IP/Port Filtering** in the navigation pane. **IPv6 IP/Port Filtering** page is displayed. Entries in this table are used to restrict certain types of data packets through the gateway. Use of such filters can be helpful in securing or restricting your local network.

Figure 56: IP or Port Filtering- IPv6



Enter the desired values by referring to **IP/Port Filtering parameters** table and click on **Add** button.

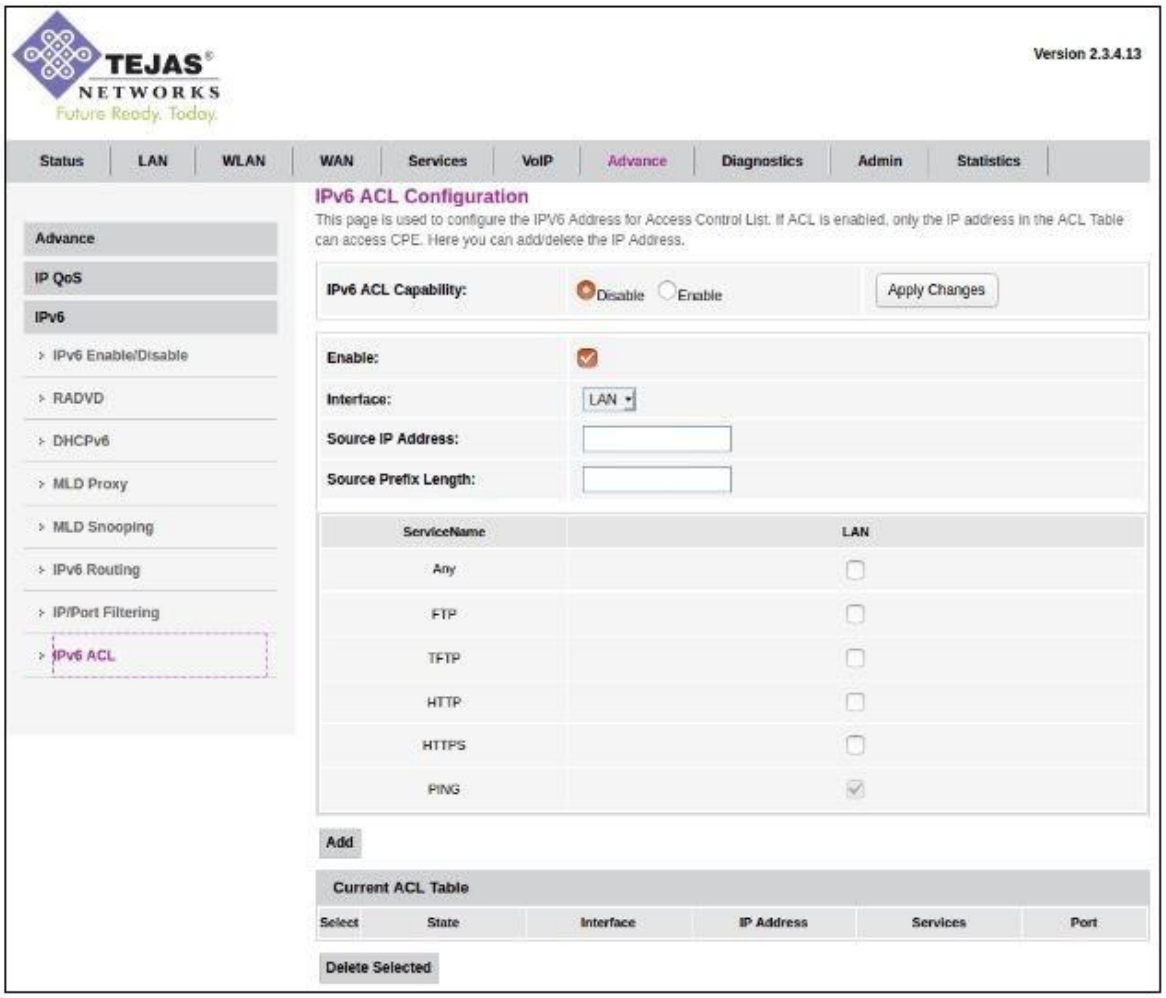
Table 42: IP/Port Filtering parameters

Parameter	Description
Outgoing Default Action	Allows you to 'Deny' or 'Allow' outgoing default action by selecting the desired radio button.
Incoming Default Action	Allows you to 'Deny' or 'Allow' incoming default action by selecting the desired radio button.
Direction	Select the direction of the port from the drop down menu. • Outgoing • Incoming
Protocol	Select the protocol to be used from the drop down menu. • TCP • UDP • ICMP
Rule Action	Allows you to 'Deny' or 'Allow' rule action by selecting the desired radio button.
Source Interface ID	Enter the identifier of the source interface.
Destination Interface ID	Enter the identifier of the destination interface.
Source Port	Enter the source port in the text box provided.
Destination Port	Enter the destination port in the text box provided.
Current Filter Table	Entries in this table are used to restrict certain types of data packets through the Gateway. Use of such filters can be helpful in securing or restricting your local network. Select the check box against the desired interface for deletion and click on **Delete Selected** button. To delete all configured interfaces on the pane, click on **Delete All** button. Check box against all interfaces on the page will get selected and will be deleted.

IPv6 ACL

Go to **IPv6-> IPv6 ACL** in the navigation pane. **IPv6 ACL Configuration** page is displayed. This page is used to configure the IPv6 address for Access Control List. If ACL is enabled, only the IP address in the ACL Table can access CPE. Here you can add or delete the IP address.

Figure 57: IPv6 ACL Configuration



Enter the desired values by referring to **IPv6 ACL parameters** table and click on **Add** button.

Table 43: IPv6 ACL parameters

Parameter	Description
IPv6 ACL Capability	Allows you to enable or disable IPv6 ACL capability by selecting the desired radio button and click on **Apply Changes** button.
Enable	Select the check box to enable the IPv6 ACL parameters.
Interface	Allows you to select the interface from the drop down men
Source IP Address	Enter the source IP address in the text box provided.
Source Prefix Length	Enter the length of the source prefix.
ServiceName	Select the desired service name to enable the LAN under LAN parameter.
Current ACL Table	This table lists the ACL configured. Select the check box against the desired interface for deletion and click on **Delete Selected** button.

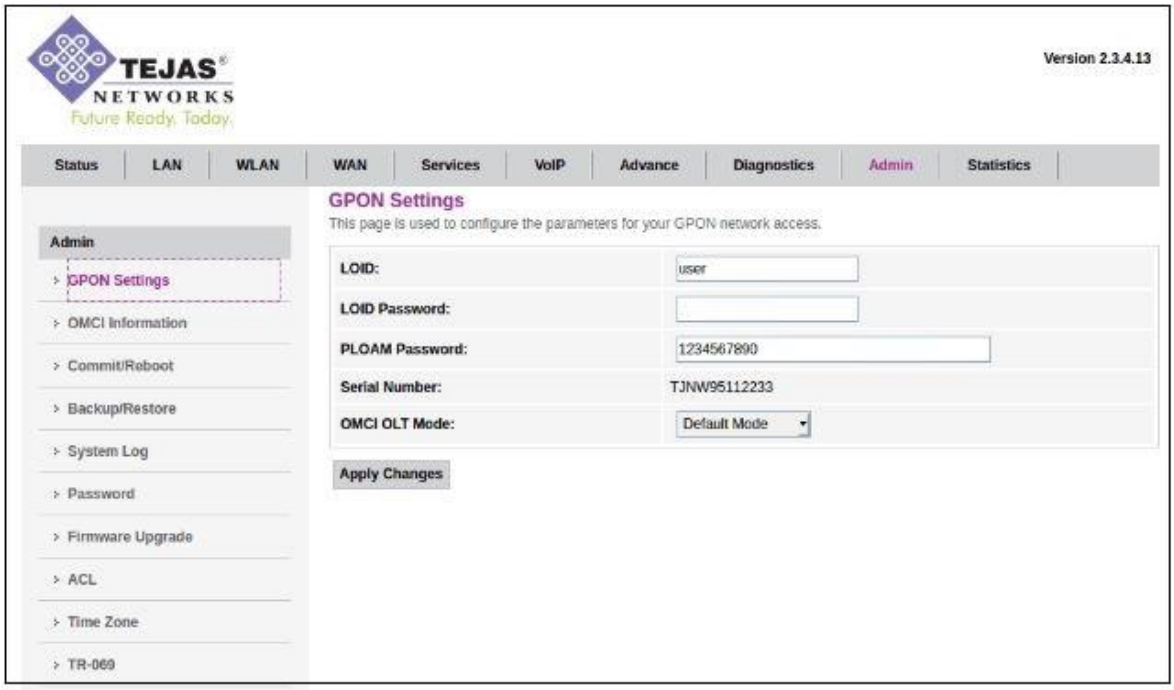
Admin

This section details admin related operations of the ONT.

GPON Settings

Go to **Admin-> GPON Settings** in the navigation pane. **GPON Settings** page is displayed. This page is used to configure the parameters for your GPON network access.

Figure 58: GPON Settings



Select or enter the desired values by referring to **GPON Settings parameters** table and click on **Apply Changes** button to save the changes.

Table 44: GPON Settings parameters

Parameter	Description
LOID	Enter the LOID used name in the text box provided.
LOID Password	Enter the LOID password in the text box provided.
PLOAM Password	Enter the PLOAM password in the text box provided.
Serial Number	Displays the serial number that is unique to each ONT.
OMCI OLT Mode	Select the OLT mode from the drop down menu.

OMCI Information

Go to **Admin-> OMCI Information** in the navigation pane. **OMCI Information** page is displayed.

Figure 59: OMCI Information

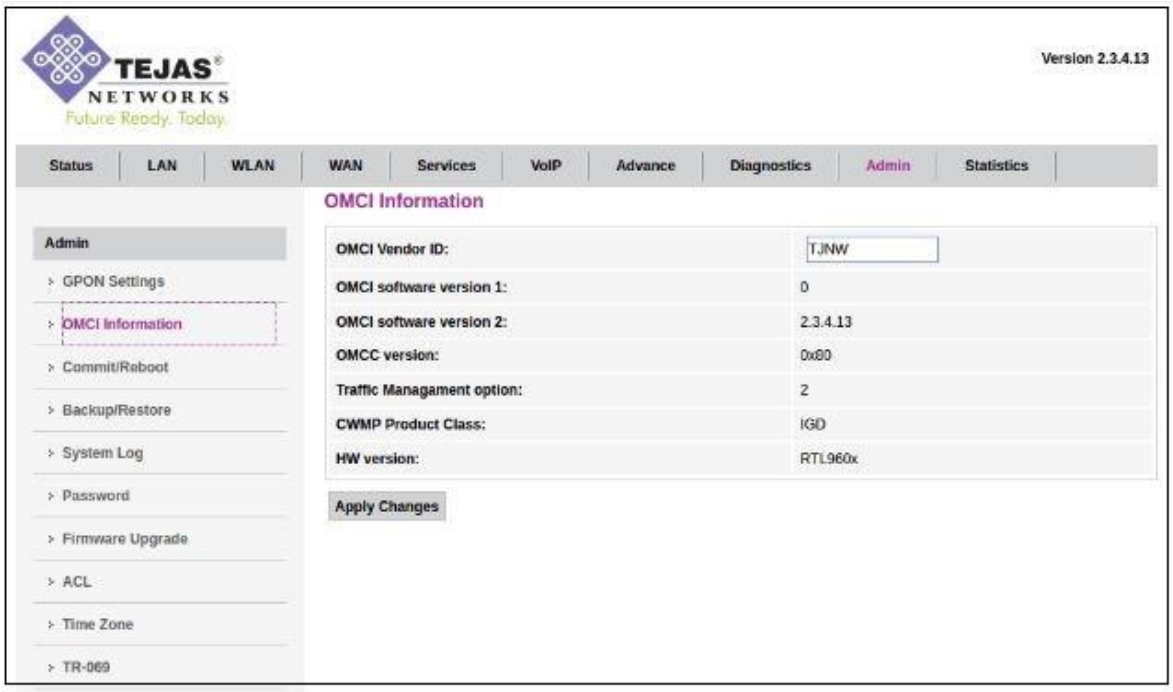


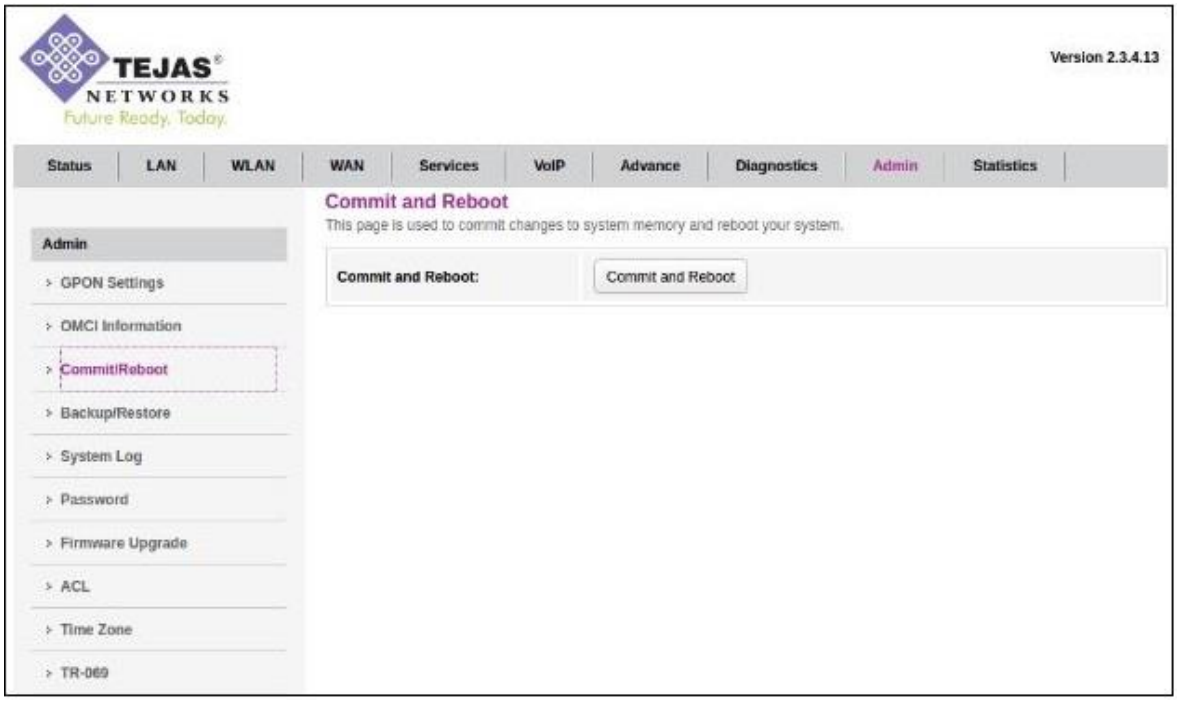
Table 45: OMCI Information parameters

Parameter	Description
OMCI Vendor ID	Enter the vendor ID in the text box provided.
OMCI software version 1	Displays the software version1.
OMCI software version 2	Displays the software version2.
OMCC version	Displays the OMCC version.
Traffic Management option	Displays the traffic management option.
CWMP Product Class	Displays the CWMP class of product.
HW version	Displays the hardware version of the ONT.

CommitReboot

Go to **Admin-> CommitReboot** in the navigation pane. **Commit and Reboot** page is displayed.

Figure 60: Commit and Reboot

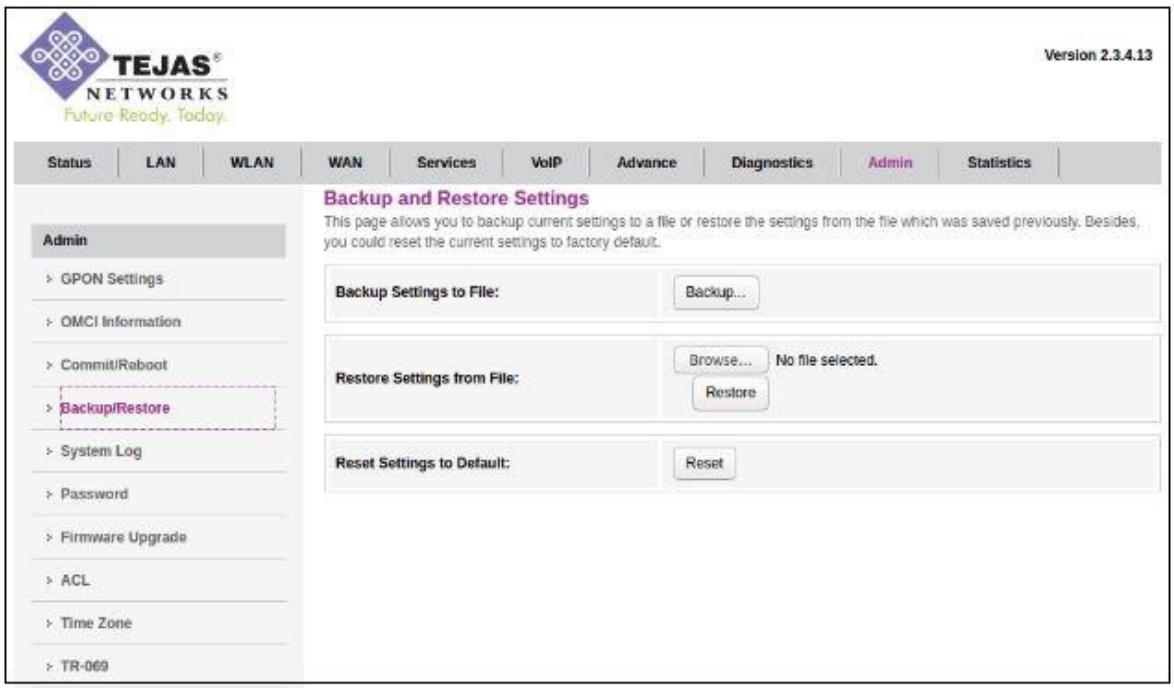


Click on **Commit and Reboot** button to commit the changes to system memory and reboot your system.

Backup/Restore

Go to **Admin-> Backup/Restore** in the navigation pane. **Backup and Restore Settings** page is displayed. This page allows you to backup current settings to a file by clicking on **Backup** button or restore the settings from the file which was saved previously by clicking on **Browse** button to select the file and click on **Restore** button. Besides, you could reset the current settings to factory default by clicking on **Reset** button.

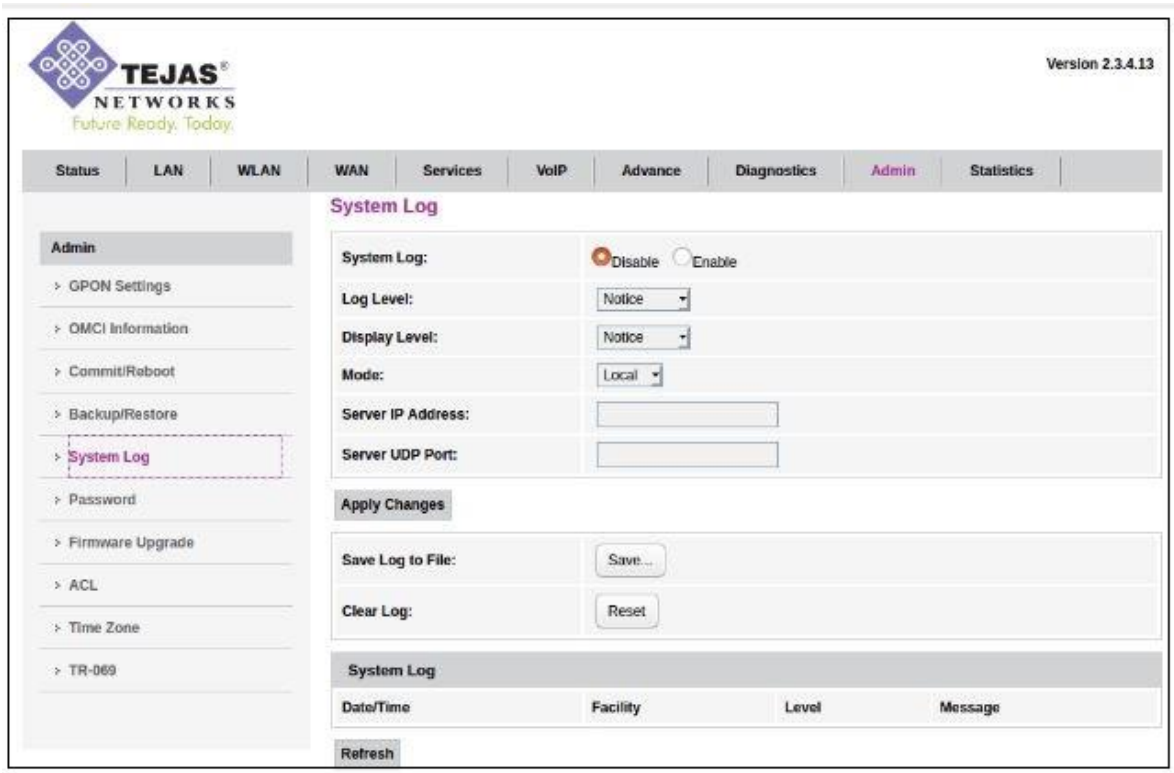
Figure 61: Backup and Restore Settings



System Log

Go to **Admin-> System Log** in the navigation pane. **System Log** page is displayed.

Figure 62: System Log



Select or enter the values by referring to **System Log parameters** and click on **Apply Changes**.

Table 46: System Log parameters

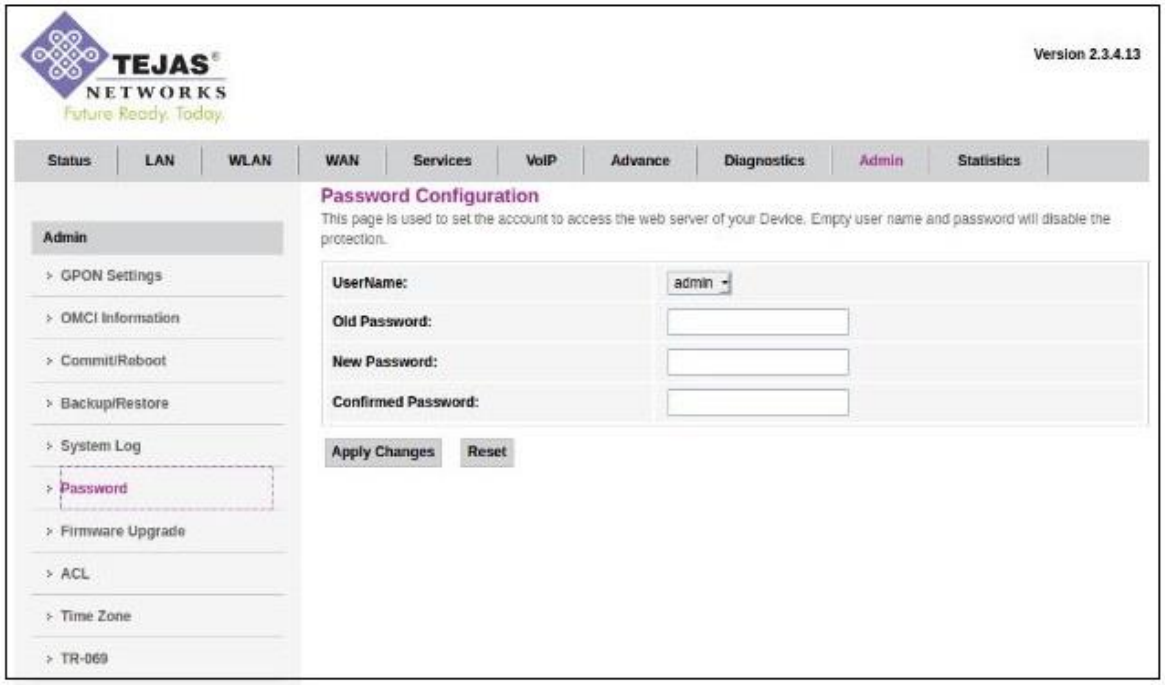
Parameter	Description
System Log	Allows you to enable or disable system log by selecting the desired radio button.
Log Level	Allows you to select the log level from the drop down menu.
Display Level	Allows you to select the displays level from the drop down menu.
Mode	Allows you to select the mode from the drop down menu.
Server IP address	Enter the IP address of the server in the text box provided.
Server UDP Port	Enter the UDP port of the server in the text box provided.
Save Log to File	To save the system logs to file, click on Save button and select the file location.
Clear Log	To clear the system logs, click on Reset button.
System Log	This parameter describes the system log details. • Date/Time • Facility • Level • Message

Click **Refresh** button to reload the page.

Password

Go to **Admin-> Password** in the navigation pane. **Password Configuration** page is displayed. This page is used to set the account to access the web server of your device. Empty user name and password will disable the protection.

Figure 63: Password Configuration



Select or enter the values by referring to **Password parameters** and click on **Apply Changes**.

Table 47: Password parameters

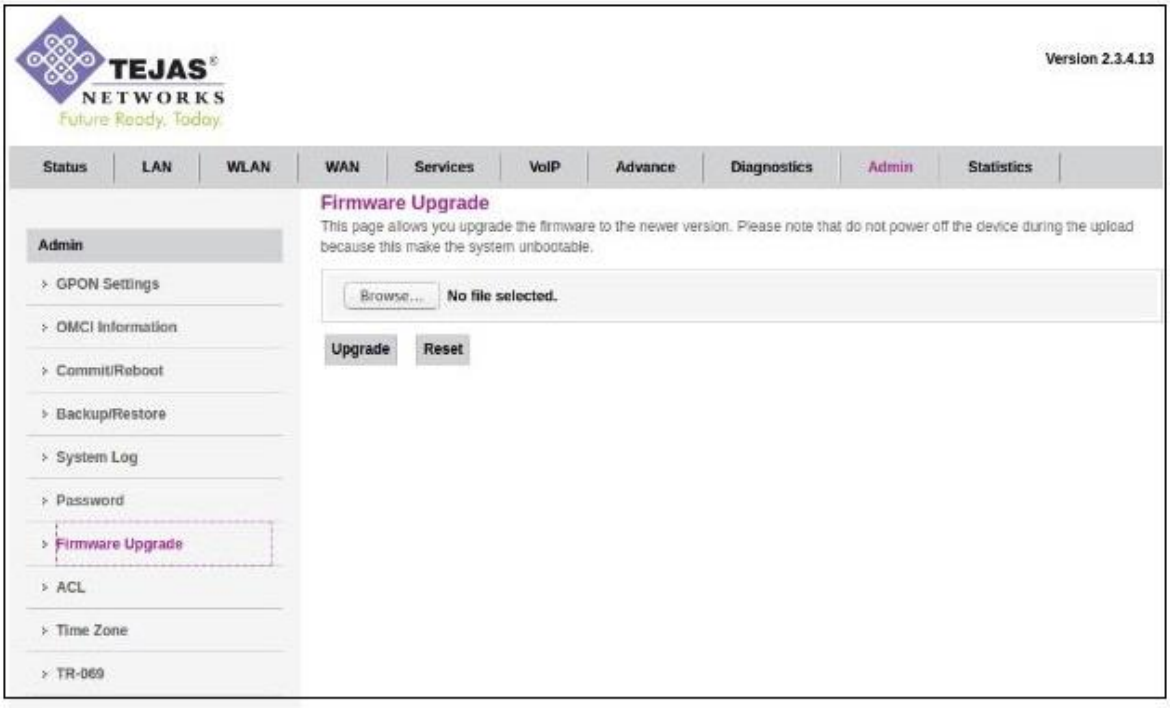
Parameter	Description
UserName	Select the desired user name from the drop down menu.
Old Password	Enter current password in the text box.
New Password	Enter the desired password in the text box provided.
Confirmed Password	Re-enter password to confirm the password.

To revert to default values on the page, click **Reset** button.

Firmware Upgrade

Go to **Admin-> Firmware Upgrade** in the navigation pane. **Firmware Upgrade** page is displayed. This page allows you to upgrade the firmware to the newer version. Please note that do not power off the device during the upload because this make the system unbootable. Click on **Browse** button, locate and open the required firmware file from the local system. Click on **Upgrade** button. To revert to default values on the page, click **Reset** button.

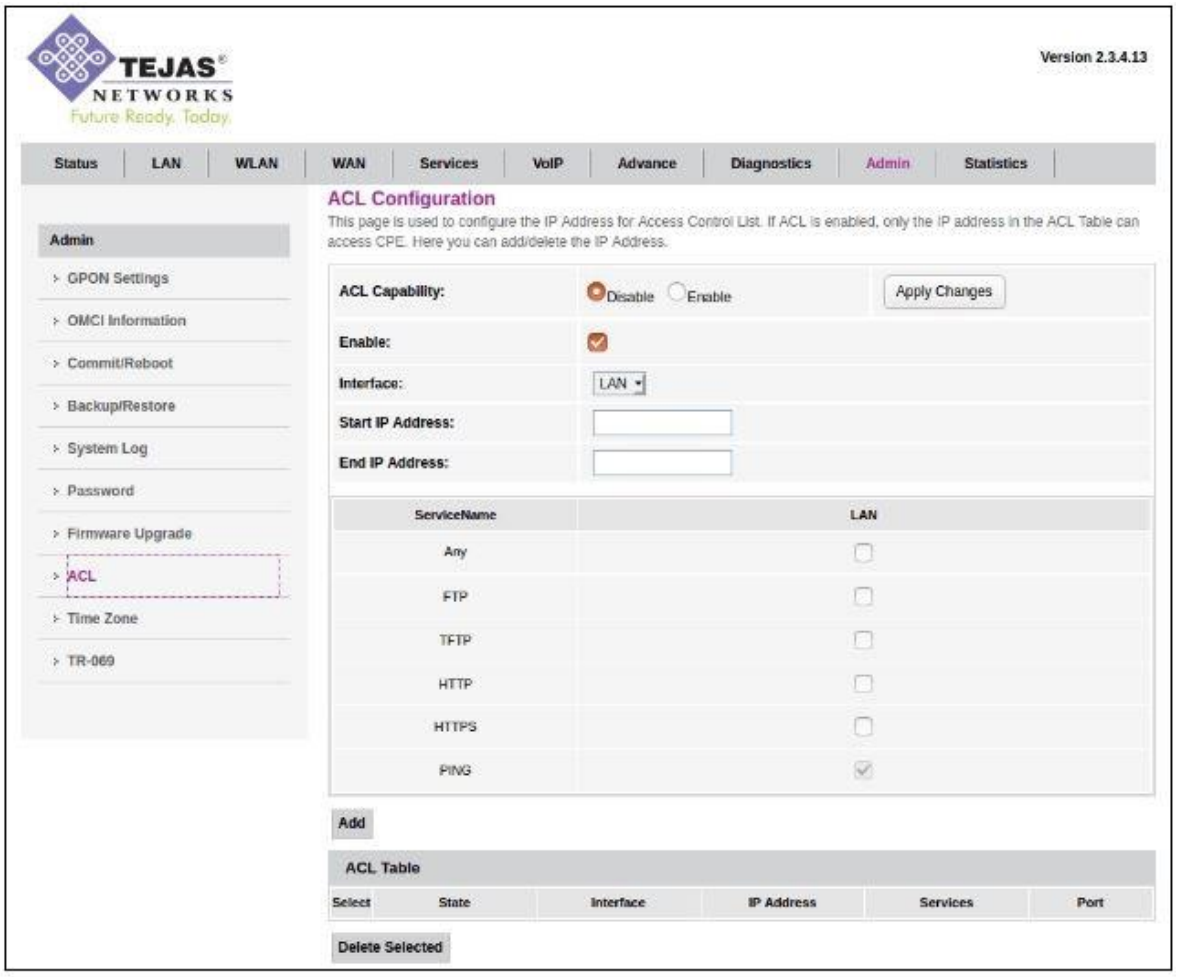
Figure 64: Firmware Upgrade



ACL

Go to **Admin-> ACL** in the navigation pane. **ACL Configuration** page is displayed. This page is used to configure the IP Address for Access Control List. If ACL is enabled, only the IP address in the ACL Table can access CPE. Here you can add or delete the IP Address.

Figure 65: ACL Configuration



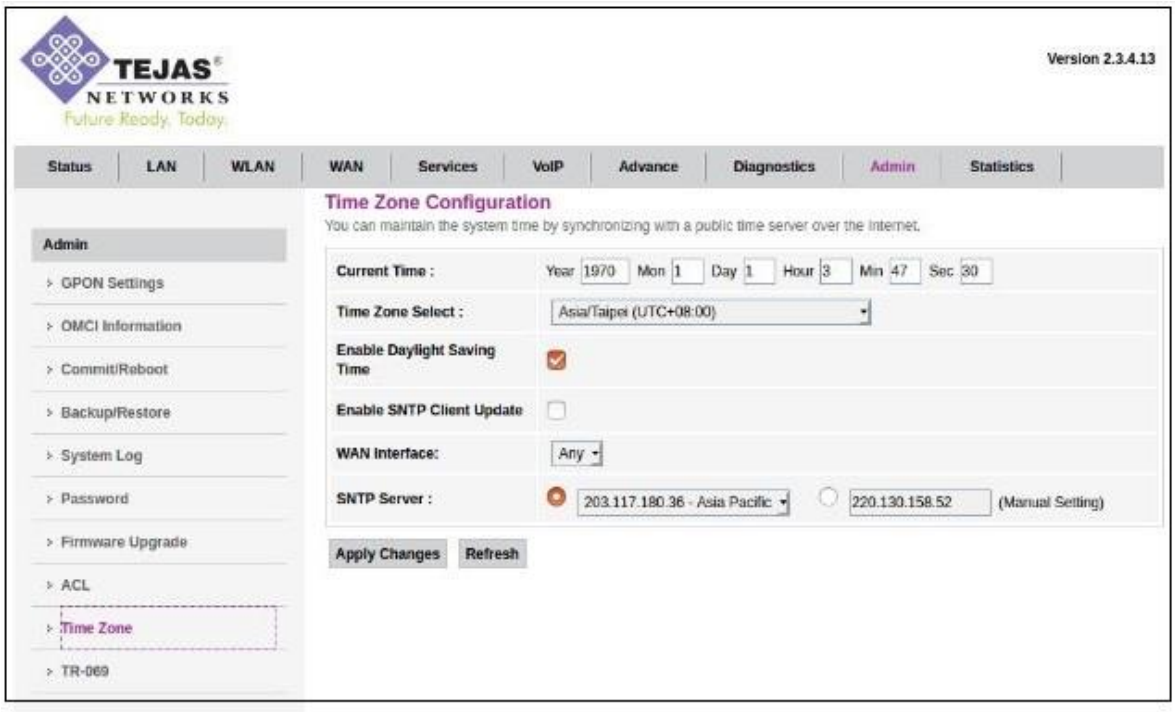
Enter the desired values by referring to **ACL Configuration parameters** table and click on **Add** button.

Table 48: ACL Configuration parameters

Parameter	Description
ACL Capability	Allows you to enable or disable ACL capability by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
Enable	Select the check box to enable the ACL parameters.
Interface	Allows you to select the interface from the drop down menu.
Start IP Address	Enter the source IP address in the text box provided.
End IP Address	Enter the destination IP address in the text box provided
ServiceName	Select the desired service name to enable the LAN under LAN parameter.
ACL Table	This table lists the ACL configured. Select the check box against the desired interface for deletion and click on **Delete Selected** button.

Time Zone

Go to **Admin-> Time Zone** in the navigation pane. **Time Zone Configuration** page is displayed. You can maintain the system time by synchronizing with a public time server over the internet.



Select or enter the values by referring to **Time Zone parameters** and click on **Apply Changes**.

Table 49: Time Zone parameters

Parameter	Description
Current Time	Enter the current date and time relevant to the configured time zone.
Time Zone Select	Select the time zone of the area in which the ONT has to be placed.
Enable Daylight Saving Time	Select the check box to enable daylight saving.
Enable SNTP Client Update	Select the check box to enable SNTP (Simple Network Time Protocol), a time synchronization protocol.
WAN Interface	Select the WAN interface from the drop down menu.
SNTP Server	Set the SNTP server by selecting the desired radio button.

Click **Refresh** button to reload the page.

TR-069

Go to **Admin-> TR-069** in the navigation pane. **TR-069 Configuration** page is displayed. This page is used to configure the TR-069 CPE (Customer Premises Equipment). Here you can change the settings for the ACS's (Access Control Servers) parameters.

Figure 66: TR-069 Configuration

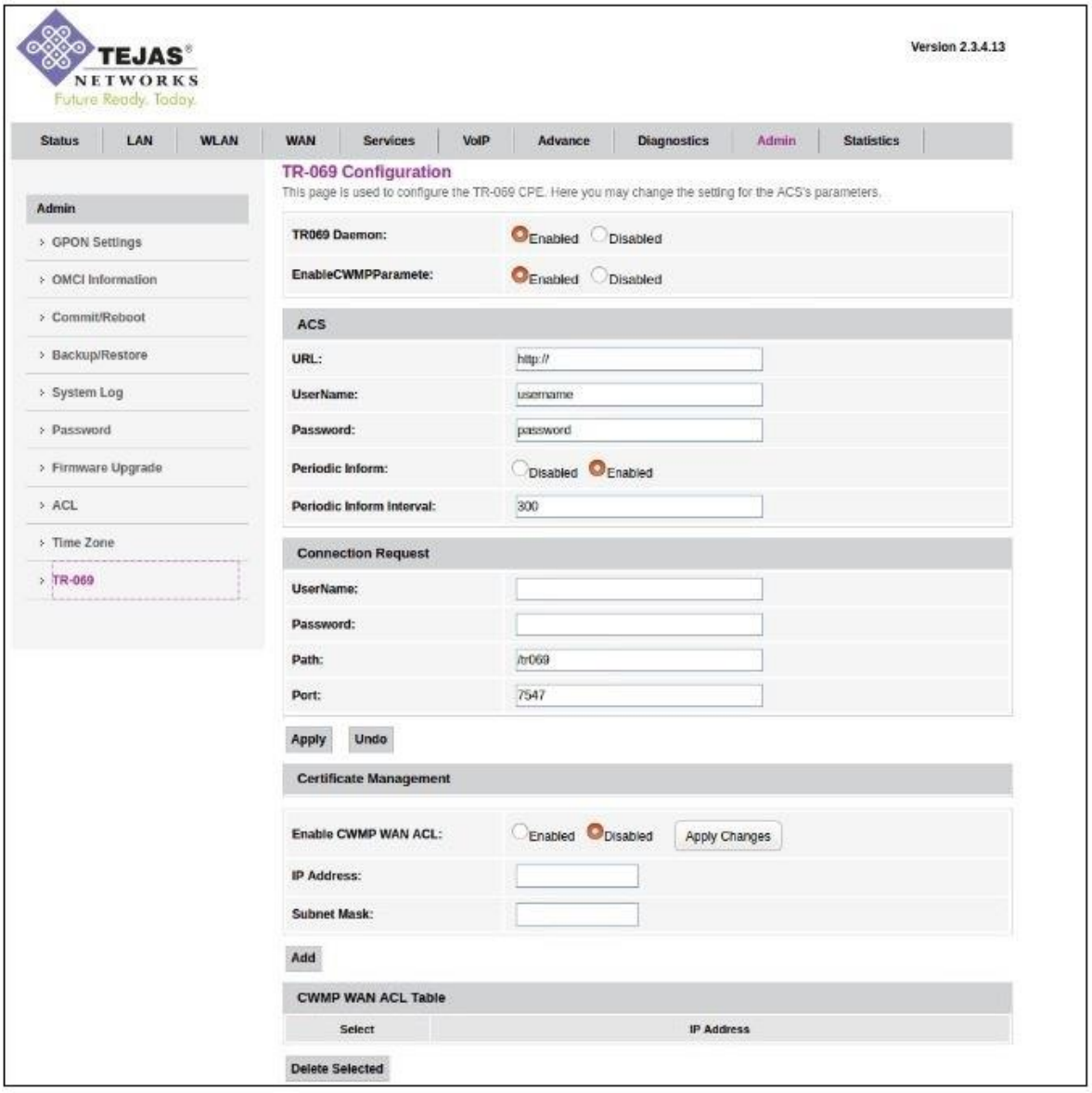


Table 50: TR-069 Configuration parameters

Parameter	Description
TR069 Daemon	Allows you to enable or disable TR069 configuration by selecting the desired radio button.
Enable CWMP Parameter	Allows you to enable CWMP parameters by selecting the desired radio button.
ACS	
URL	Enter the internet address of the ACS, which is accessible from the device.
UserName	Enter the user name in the text box provided.
Password	Enter the password in the text box provided.
Periodic Inform	Allows you to enable or disable periodic inform by selecting the desired radio button.
Periodic Inform Interval	Enter the periodic inform interval that defines a frequency of communication with the ACS.
Connection Request	
UserName	Enter the user name in the text box provided.
Password	Enter the password in the text box provided.
Path	Enter the path details.
Port	Enter the port number in the text box provided.
Certificate Management	
Enable CWMP WAN ACL	Allows you to enable or disable CWMP (CPE WAN Management Protocol) ACL (Access Control List) by selecting the desired radio button. Click on **Apply Changes** button to save the changes.
IP Address	Enter the IP address in the text box provided.
Subnet Mask	Enter the subnet mask in the text box provided and click on **Add** button.
Enable	Select the check box to enable the ACL parameters.
Interface	Allows you to select the interface from the drop down menu.
CWMP WAN ACL Table	This table lists the CWMP ACLs configured. Select the check box against the desired IP address for deletion and click on **Delete Selected** button.

Statistics

This section details the interface statistics and PON statistics.

Interface Statistics

Go to **Statistics-> Interface** in the navigation pane. **Interface Statistics** page is displayed. This page shows the packet statistics for transmission and reception regarding to network interface.

Figure 67: Interface Statisitcs

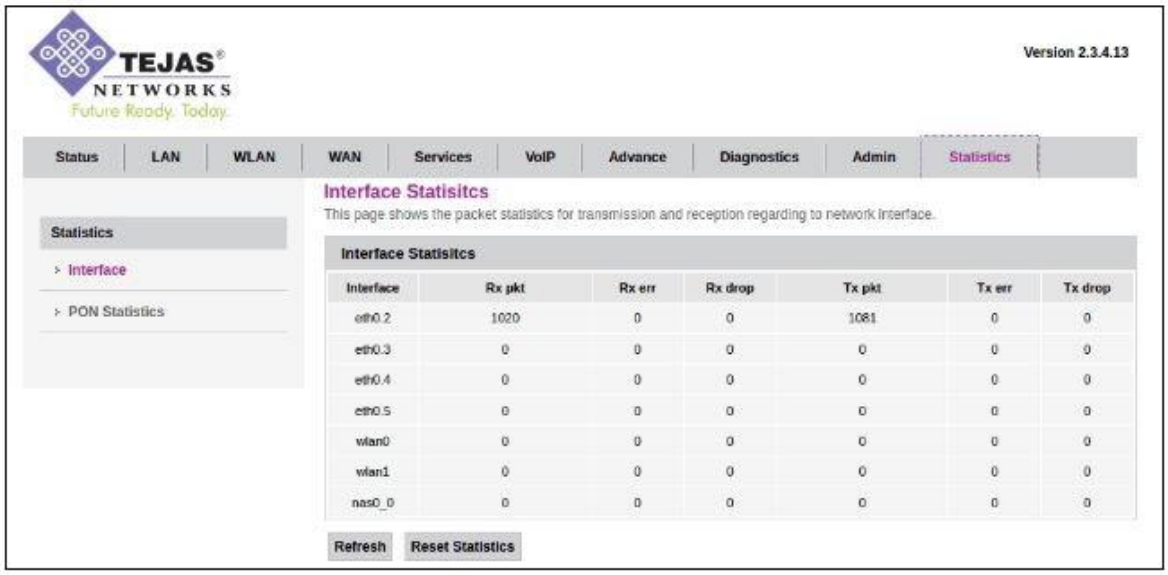


Table 51: Interface Statistics parameters

Parameter	Description
Interface	Displays the interface name.
Rx pkt	Displays the count of packets received.
Rx err	Displays the count of errors received.
Rx drop	Displays the count of drops received.
Tx pkt	Displays the count of packets transmitted.
Tx err	Displays the count of errors transmitted.
Tx drop	Displays the count of drops transmitted.

PON Statistics

Go to **Statistics-> PON Statistics** in the navigation pane. **PON Statistics** page is displayed.

Figure 68: PON Statistics

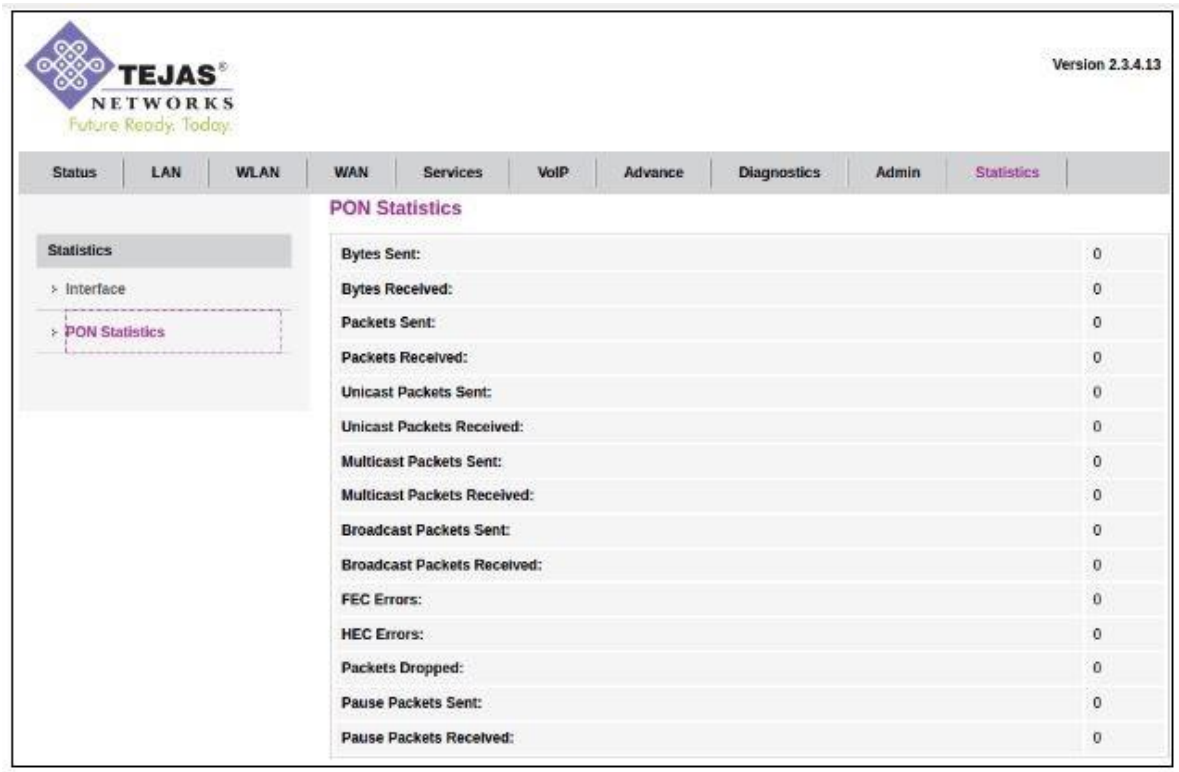


Table 52: PON Statistics parameters

Parameter	Description
Bytes Sent	Displays the total number of bytes sent.
Bytes Received	Displays the total number of bytes received.
Packets Sent	Displays the total number of packets sent.
Packets Received	Displays the total number of packets received.
Unicast Packets Sent	Displays the count of transmitted good packets directed to the unicast address.
Unicast Packets Received	Displays the count of received good packets directed to the unicast address.
Multicast Packets Sent	Displays the count of transmitted good packets directed to the multicast address.
Multicast Packets Received	Displays the count of received good packets directed to the multicast address.
Broadcast Packets Sent	Displays the count of transmitted good packets directed to the broadcast address.
Broadcast Packets Received	Displays the count of received good packets directed to the broadcast address.
FEC Errors	Displays the count of FEC errors.
HEC Errors	Displays the count of HEC errors.
Packets Dropped	Displays the total number of packets dropped.
Pause Packets Sent	Displays the total number of pause packets sent.
Pause Packets Received	Displays the total number of pause packets received.