Figure 7-28 WiFi statistics page

WLAN statistics				
Tenter band type and name				
Counters	2.4 GHz NOKIA-D0E0 (i)	5 GHz low NOKIA-D0E0_Guest (i)	5 GHz high NOKIA-D0E0 (i)	6 GHz NOKIA-D0E0_Guest
Bytes sent	74416711	46395786	4294967259	46395445
Bytes received	1258705640	3129	3731085096	242
Packets sent	224095	137973	15227739	137977
Packets received	4046525	30	12731963	4
Errors sent	0	0	0	0
Discard packets sent	0	0	0	0
Discard packets received	0	0	0	0
Rx drops	0	0	0	0
Tx drops	0	0	0	0

2

Select the **WLAN statistics** tab to display WLAN statistics.

END OF STEPS -

Devices

7.26 Overview

This section describes how to view device information from the **Device** menu.

7.27 Viewing Device Information

1

Click **Devices** in the left pane. The *Devices* page displays the devices.

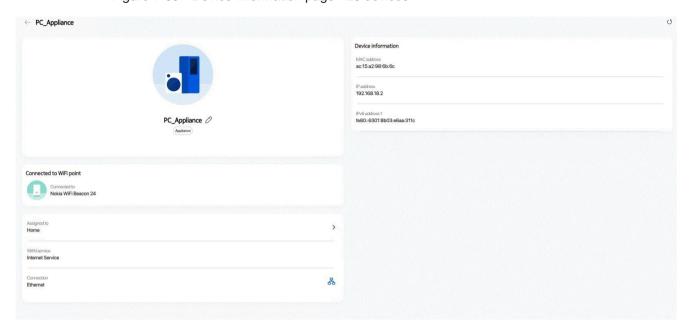
Figure 7-29 Devices page



2

The Devices page lists the devices. Click on a Device to view the respective device Info page. The *Device Info* page displays the details of the selected device in a network.

Figure 7-30 Device information page - L3 devices

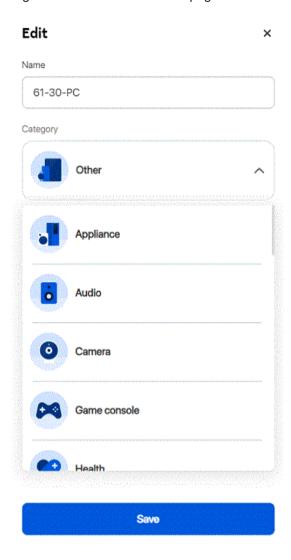


The device name can be renamed by clicking the edit icon $\hat{\mathcal{O}}$.

Perform the following steps to rename the client device:

- a. To rename the client device, click the Edit icon \mathcal{O} . The **Edit** page displays.
- b. On the Edit page, enter the name to create your own customized name or select a category listed in the drop-down menu.
- c. Click Save.

Figure 7-31 Device Rename page



END OF STEPS

Security Configuration

7.28 Overview

This section describes the security configuration procedures that can be performed from the following sub-menu options under the **Security** menu:

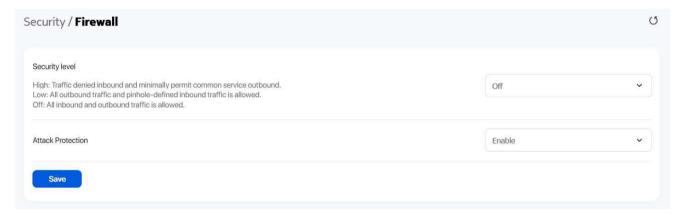
Sub-menu	Procedure
Firewall	7.29 "Configuring the Firewall" (p. 119)
MAC filter	7.30 "Configuring the MAC Filter" (p. 120)
IP filter	7.31 "Configuring the IP Filter" (p. 122)
Family profiles	7.32 "Configuring Family Profiles" (p. 123)
DMZ and ALG	7.33 "Configuring DMZ and ALG" (p. 134)
Access control	7.34 "Configuring Access Control" (p. 135)

7.29 Configuring the Firewall

1

Click **Security** → **Firewall** in the left pane. The *Firewall* page displays.

Figure 7-32 Firewall page



2

Configure the following parameters.

Table 7-19 Firewall parameters

Field	Description
Security level	Select the security level from the list:
	 High: Pre-routing and application services are not supported. UDP Port 8000 can be used to access the services. For example, FTP can use 8021 and Telnet can use 8023. Regular UDP cannot be used. RG access is permitted via the LAN side but not via the WAN side.
	 Low: All outbound traffic and pinhole-defined inbound traffic is allowed. Pre-routing is supported: port forwarding, DMZ, host application, and host drop. Also supported are application services: DDNS, DHCP, DNS, H248, IGMP, NTP client, SSH, Telnet, TFTP, TR-069, and VoIP. The following types of ICMP messages are permitted: echo request and reply, destination unreachable, and TTL exceeded. Other types of ICMP messages are blocked. DNS proxy is supported from LAN to WAN but not from WAN to LAN.
	Off: All inbound and outbound traffic is allowed. No firewall security is in effect.
Attack Protection	Select Enable or Disable from the list to enable or disable protection against DoS or DDoS attacks. Default value: Enable . Note: If you select Disable, a security warning is displayed that this option poses security risks. Click OK to continue.

3	
	Click Save.
EN	O OF STEPS

Configuring the MAC Filter 7.30

Click **Security**→**MAC filter** in the left pane. The *MAC filter* page displays.

Figure 7-33 MAC filter page



2 -

Configure the following parameters:

Table 7-20 MAC filter - Ethernet Interface parameters

Field	Description	
Ethernet Interface		
MAC filter mode	Select the MAC filter mode from the list: • Blocked • Allowed	
LAN port	Select the toggle button to enable any of the LAN ports.	
MAC address	Select a MAC address from the list or enter the MAC address in the text field.	

Click Save.

Configure the following parameters:

Table 7-21 MAC filter - WiFi SSID parameters

Field	Description
WiFi SSID	
MAC filter mode	Select the MAC filter mode from the list: • Blocked • Allowed
SSID select	Select the SSID from the list.
Enabled	Select the toggle button to enable the MAC filter.
MAC address	Select a MAC address from the list or enter the MAC address in the text field.

Click Save.

END OF STEPS

7.31 **Configuring the IP Filter**

Click **Security**→**IP filter** in the left pane.

Click Add Filter to add a IPv4 or IPv6 filter. The Add IP filter page displays.

Figure 7-34 IP filter page



3

Configure the following parameters:

Table 7-22 IP filter parameters

Field	Description
Add IPv4 filter or Add IPv6 filter parameters	
Enable IP filter	Select the toggle button to enable an IP filter.
Mode	Select an IP filter mode from the list:
	Drop for upstream
	Drop for downstream
Source	Select an internal client from the list:
	Custom Settings: uses the IP address input below
	IP: uses the connecting devices' IP to the Beacon
Add IPv4 filter parameters	
Local IP address	Enter the local IP address.
Local subnet mask	Enter the local subnet mask.
Remote IP address	Enter the remote IP address.
Remote subnet mask	Enter the remote subnet mask.
Protocol	Select an application protocol or select ALL from the list.
Add IPv6 filter parameters	
Source IP address	Enter the source IP address.
Source Prefix	Enter the source prefix.
Destination IP address	Enter the destination IP address.
Destination prefix	Enter the destination prefix.
Protocol	Select an application protocol or select ALL from the list.

4	
	Click Save.
END	OF STEPS —

7.32 Configuring Family Profiles

1

Click **Security**—**Family profiles (Parental control)** from the left pane. The *Family profiles (Parental control)* page displays.

3

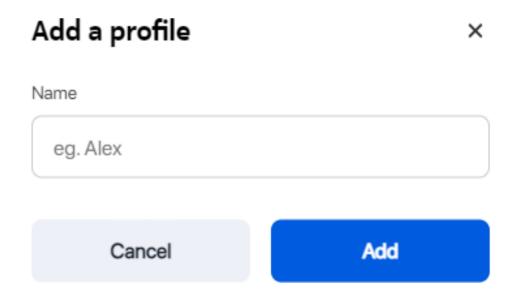
Figure 7-35 Family profiles (Parental control) page



Click **Add profile +** to add a profile with parental controls.

In the Add a profile page, enter a name for the profile and click Add.

Figure 7-36 Add a profile page



In the Select the devices used by <profile> page, select the check box next to the device name and click **Save** to assign the device to the profile.

Note: A device can be assigned to only one profile. Unassigned devices are added to the Home profile.

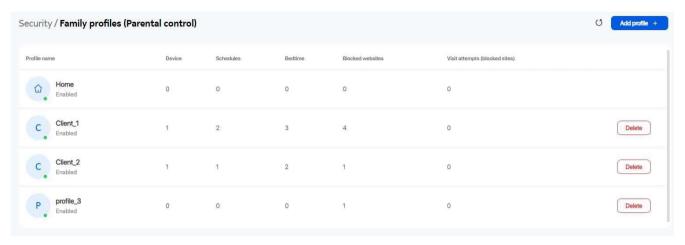
Figure 7-37 Assign devices to family profile

Select the devices used by Client_1

A device can only belong to one profile. Unassigned devices will be added to the "Home" profile.



The new profile name is listed in the table in the Family profiles (Parental control) page.



5 -

Click a profile to configure parental control for the profile. A page displays the profile parameters.

Figure 7-39 Family profile configuration page



Select the Internet Access toggle button to enable internet access.

Assign more devices

7

Assign more devices to the profile, if required:

a. In the profile page, click the edit icon \oslash next to **Assigned Devices** to assign devices to the profile. The *Select the devices used by <profile*> page displays.

Select the devices used by Client_1



A device can only belong to one profile. Unassigned devices will be added to the "Home" profile.



- b. Select the check box next to the device to assign to the profile.
- c. Click Save.

Configure and enable schedules

8

Configure schedules for the profile:

- a. In the profile page, click the edit icon Onext to **Schedules** to create one or more schedules for the profile to set specific days and time slots when the Internet should be turned off.
- b. Click Create Schedule.
- c. In the Add a schedule page, configure the following:

Add a schedule × Name Homework_Time Start time 00 End time 20 00 Days of the week Cancel Save

- 1. Enter the name of the schedule in the Name field.
- 2. Select the start time, end time, and select the days of the week on which the schedule will be in effect.
- 3. Click **Save**. The schedule is created and listed in the Schedules page.

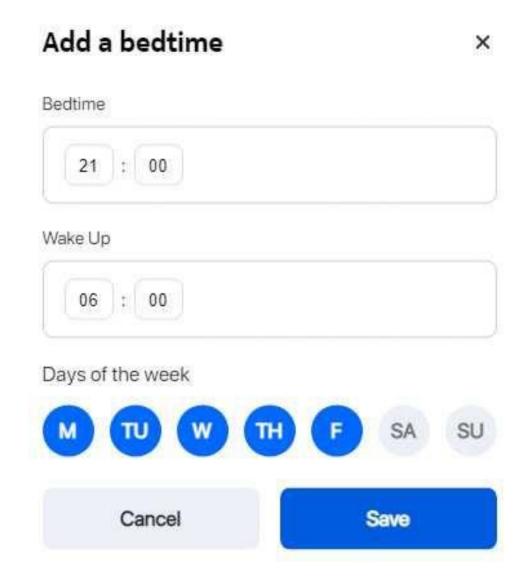
Schedules Homework_Time Mon Tue Wed Thu Fri Sat 18:00 -20:00 Dinner Everyday 20:30 - 21:30 Done

Configure and enable bedtime

10 -

Configure bedtime for the profile:

- a. In the profile page, click the edit icon Onext to **Bedtime** to configure bedtime for the profile to automatically pause internet access at this time.
 - Only one bedtime can be assigned per day.
- b. Click Create Bedtime.
- c. In the Add a bedtime page, configure the following:



Oraft

- 1. Select the Bedtime, Wake Up time, and select the days of the week on which the bedtime will be in effect.
- 2. Click Save. The bedtime is created and listed in the Bedtime page.
- d. In the Bedtime page, select the toggle button to enable the bedtime and click Done.

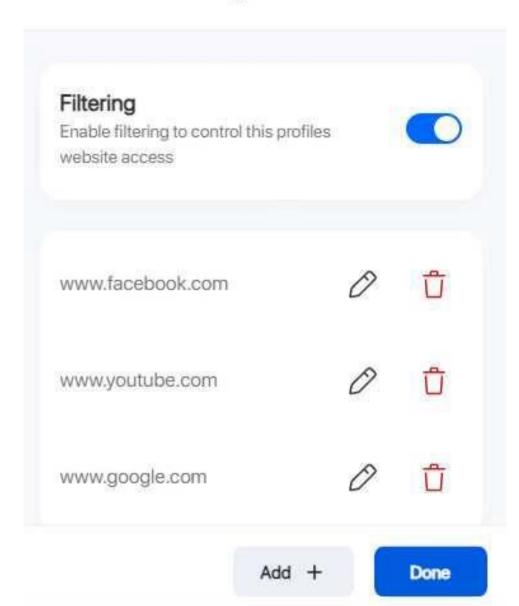
Configure website blocking

11

Configure website blocking for the profile:

- a. In the profile page, click the edit icon Onext to **Website blocking** to control websites and services that devices assigned to the profile can access.
- b. Click Continue.
- c. In the Website blocking page, perform the following:

Website blocking



- 1. Select the toggle button next to **Filtering** to enable filtering to control the profile's website access.
- 2. Click Add + to add a website URL to be blocked.
- 3. Enter the URL in the Website URL field and click Save.

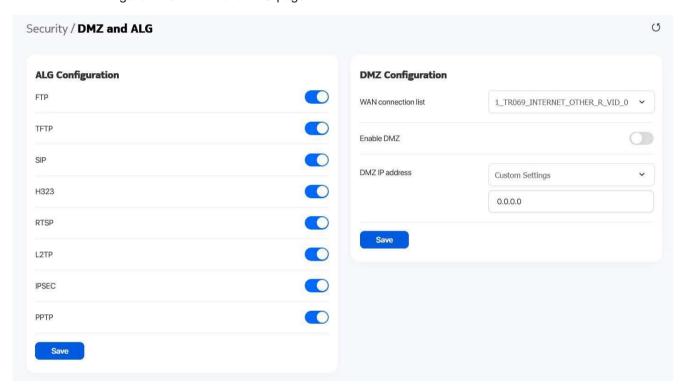
4. Click Add + to add more website URLs to be blocked or click Done.

END OF STEPS

Configuring DMZ and ALG 7.33

Click **Security**→**DMZ** and **ALG** in the left pane. The *DMZ* and *ALG* page displays.

Figure 7-40 DMZ and ALG page



2

Configure the following parameters:

Field	Description
ALG Configuration	Select the toggle button next to the protocol name to enable the protocols to be supported by ALG: • FTP • TFTP • SIP • H323 • RTSP
	• L2TP • PPTP

Click Save.

Configure the following parameters:

Table 7-24 DMZ Configuration parameters

Field	Description
WAN connection list	Select a WAN connection from the list.
Enable DMZ	Select the toggle button to enable DMZ on the WAN connection.
DMZ IP address	Select Custom Settings and enter the DMZ IP address or select the IP address of a connected device from the list.

Click Save.

7.34 Configuring Access Control

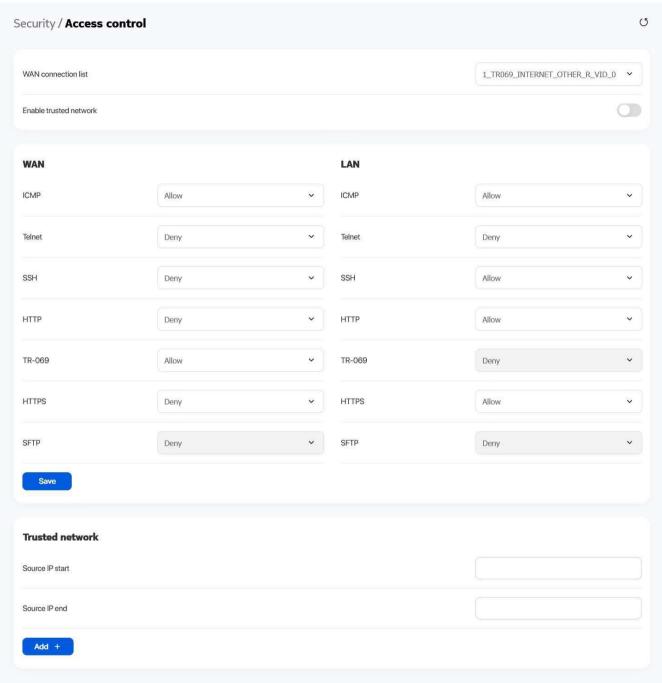
This procedure describes how to configure the access control level (ACL).

Note: ACL takes precedence over the firewall policy.

The trusted network will be shared for all WAN connections; it is not applied individually to a WAN connection.

Click Security Access control in the left name. The Access control name displays

Click **Security**→**Access control** in the left pane. The *Access control* page displays.



Configure the following parameters:

Field	Description
WAN connection list	Select a WAN connection from the list.
Enable trusted network	Select the toggle button to enable a trusted network.
WAN	The following protocols are supported: ICMP, Telnet, SSH, HTTP, TR-069, HTTPS, SFTP. Select an access control level for each protocol: Allow, Deny, or Trusted Network Only LAN side: Allow or Deny Note: If you allow SSH/Telnet/HTTP/HTTPS on WAN, a security warning is displayed. Click OK to continue.
LAN	The following protocols are supported: ICMP, Telnet, SSH, HTTP, TR-069, HTTPS, SFTP. Select an access control level for each protocol: LAN side: Allow or Deny Notes: If you allow Telnet or HTTP on LAN, a security warning is displayed. Click OK to continue. If you Deny HTTP and HTTPS on LAN at same time, the following warning message is displayed, 'Disabling both HTTP and HTTPS on LAN may lock you out from accessing the web GUI and mobile application. Atleast one of them should be enabled.' Click OK to continue.

Click **Save** to save the ACL configuration.

4

If the **Enable trusted network** option is enabled, add one or more subnet trusted networks. You can add up to 32 trusted networks.

Table 7-26 Trusted Network parameters

Field	Description
Source IP start	Enter a start IP address range for the new subnet trusted network.
Source IP end	Enter an end IP address range for the new subnet trusted network.

Click Add +.

END OF STEPS -

Advanced Settings

7.35 Overview

This section describes the advanced settings that can be performed from the following sub-menu options under the Advanced settings menu:

Sub-menu	Procedure
Port forwarding	7.36 "Configuring Port Forwarding" (p. 138)
Port triggering	7.37 "Configuring Port Triggering" (p. 139)
DDNS	7.38 "Configuring DDNS" (p. 140)
NTP	7.39 "Configuring NTP" (p. 142)

Configuring Port Forwarding 7.36

Click **Advanced settings** → **Port forwarding** in the left pane. The *Port forwarding* page displays.

Figure 7-42 Port forwarding page



Configure the following parameters:

Table 7-27 Port forwarding parameters

Field	Description
WAN port	Enter the WAN port range.

Table 7-27 Port forwarding parameters (continued)

Field	Description
LAN port	Enter the LAN port range.
Internal client	Select a connected device from the list and enter the associated IP address. The default is Custom Settings .
Protocol	Select the port forwarding protocol from the list: • TCP • UDP • TCP/UDP
WAN connection list	Select a WAN connection from the list. Only active devices are displayed in the list.

3

Click Save.

END OF STEPS

7.37 Configuring Port Triggering

1

Click **Advanced settings** → **Port triggering** in the left pane. The *Port triggering* page displays.

Figure 7-43 Port triggering page



2

Configure the following parameters:

Draft

Table 7-28 Port triggering parameters

Field	Description
Open port	Enter the open port range.
Triggering port	Enter the triggering port range.
Expire time	Enter the expiration time in seconds. Allowed range: 1 to 999999 seconds
Open protocol	Select the open port protocol from the list: • TCP • UDP • TCP/UDP
Trigger protocol	Select the triggering port protocol from the list: • TCP • UDP • TCP/UDP
WAN connection list	Select a WAN connection from the list. Only active devices are displayed in the list.

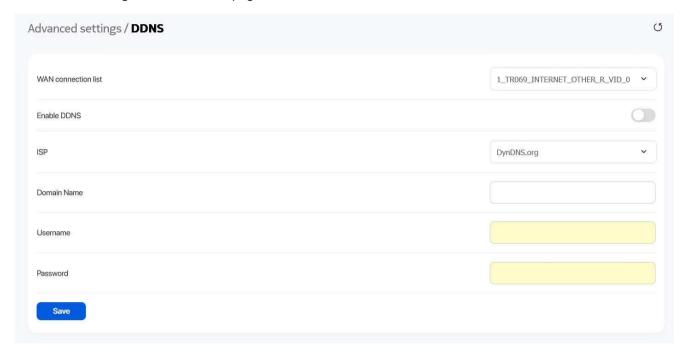
3	
	Click Save.
End	OF STEPS

7.38 Configuring DDNS

1

Click **Advanced settings** → **DDNS** in the left pane. The *DDNS* page displays.

Figure 7-44 DDNS page



Configure the following parameters:

Table 7-29 DDNS parameters

Field	Description
WAN connection list	Select a WAN connection from the list.
Enable DDNS	Select the toggle button to enable DDNS on the WAN connection.
ISP	Select an ISP from the list.
Domain Name	Enter the domain name of the DDNS server.
Username	Enter the username.
Password	Enter the password.

Click Save.

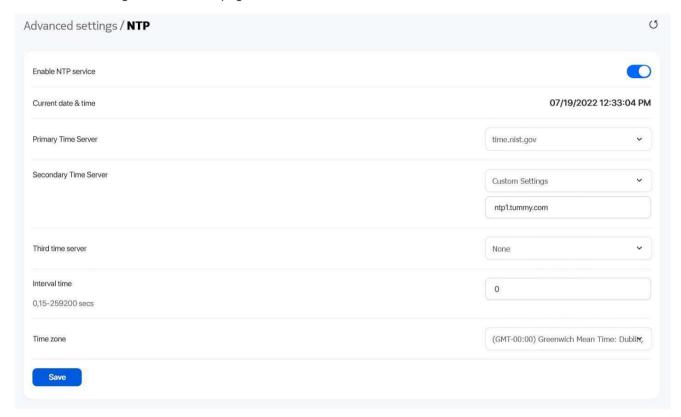
END OF STEPS -

7.39 Configuring NTP

1

Click **Advanced settings**→**NTP** in the left pane. The *NTP* page displays.

Figure 7-45 NTP page



2

Configure the following parameters:

Table 7-30 NTP parameters

Field	Description
Enable NTP service	Select the toggle button to enable the NTP service.
Current date & time	Displays the current local date and time.
Primary Time Server Secondary Time Server Third Time Server	Select a time server from the list or select Custom Settings and enter the IP address of the time server. You can select None if you do not want configure a secondary or tertiary time server.

Field	Description
Interval time	Enter the interval at which to get the time from the time server, in seconds. Allowed values: 0 to 259200 seconds
Time zone	Select the local time zone from the list.

3 -		_
-	Save.	
END (TEPS -	

Maintenance

7.40 Overview

This section describes the maintenance procedures that can be performed from the following submenu options under the **Maintenance** menu:

Sub-menu	Procedure
Change password	7.41 "Configuring the Password" (p. 144)
Backup and restore	7.42 "Backing Up the Configuration" (p. 146) 7.43 "Restoring the Configuration" (p. 146)
Firmware upgrade	7.44 "Upgrading Firmware" (p. 148)
Diagnostics	7.45 "Diagnosing WAN Connections" (p. 149)
Log	7.46 "Viewing Log Files" (p. 153)

7.41 Configuring the Password

A password must adhere to the following password rules:

- The password may consist of uppercase letters, lowercase letters, digital numbers, and the following special characters! # + , / @ _ : =]
- The password length must be from 8 to 24 characters
- · The first character must be a digital number or a letter
- The password must contain at least two types of characters: numbers, letters, or special characters
- The same character must not appear more than 8 times in a row

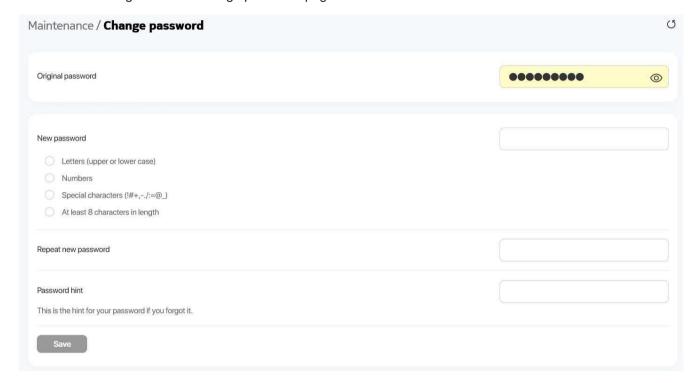
When the password meets the password rules, the application displays the message "Your password has been changed successfully".

When the password does not meet the password rules, the application displays a message to indicate which password rule has not been followed, for example:

- · The password is too short
- The password is too long
- The first character cannot be a special character
- · There are not enough character classes

Click Maintenance—Change password in the left pane. The Change password page displays.

Figure 7-46 Change password page



2

Configure the following parameters:

Table 7-31 Change password parameters

Field	Description
Original password	Enter the current password.
New password	Enter the new password as per the password rules.
Repeat new password	Re-enter the new password (must match the password entered above).
Password hint	Enter the password hint message.

3

Click Save.

END OF STEPS -

Backing Up the Configuration 7.42

Click Maintenance Backup and restore in the left pane. The Backup and restore page displays.

Figure 7-47 Backup and restore page



Click Export to export the current Beacon configuration to your PC. The configuration filename is config.cfg.

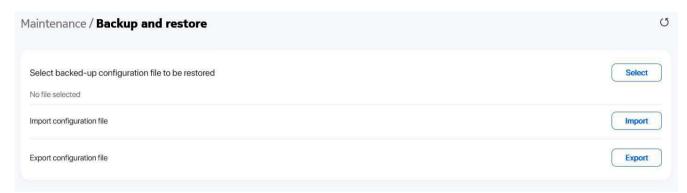
END OF STEPS

7.43 **Restoring the Configuration**

Note: Ensure that you have a previously backed-up configuration file.

Click Maintenance→Backup and restore in the left pane. The Backup and restore page displays.

Figure 7-48 Backup and restore page

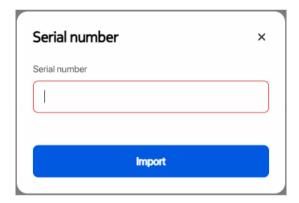


Click Select and select the previously backed-up configuration file.

Click **Import** to import the configuration file created in 7.42 "Backing Up the Configuration" (p. 146) and restore the Beacon to the backed-up configuration.

a. If the configuration file is from the same Beacon variant with a different serial number, you will be prompted to enter the serial number of the original device.

Figure 7-49 Backup and restore: Serial number



- b. If you enter an invalid serial number, the back up fails and an error message is displayed.
- c. The backup cannot be restored for the configuration files from a different Beacon variant, OPID, or different release prior to Release 2402.

A confirmation message displays after successful restore and the Beacon reboots.

END OF STEPS

7.44 **Upgrading Firmware**

Click Maintenance→Firmware upgrade in the left pane. The Firmware upgrade page displays.

Figure 7-50 Firmware upgrade page



Click **Select** and select the file for firmware upgrade.

Click **Upgrade** to upgrade the firmware. The status displays in the *Upgrade status* panel. The device reboots after firmware upgrade and displays the login page.

Figure 7-51 Example of upgrade status messages

Upgrade status

Upgrade Done!

get_cert_type_from_buildinfo NCG

Image check pass, everything is OK

Saving config files...

Performing system upgrade...

Upgrade completed

4

mkdir: can't create directory '/configs/swdl': File exists

sh: using fallback suid method

sync: using fallback suid method

date: using fallback suid method

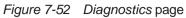
Upgrade ok, Rebooting...

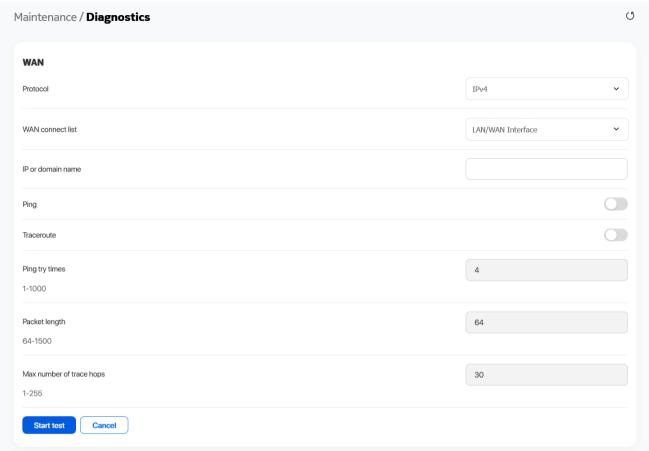
END OF STEPS

7.45 Diagnosing WAN Connections

1

Click **Maintenance**→**Diagnostics** in the left pane. The *Diagnostics* page displays.





2 -

Configure the following parameters.

Table 7-32 Diagnostics parameters

Field	Description
Protocol	Select a protocol from the list:
	• IPv4
	• IPv6
WAN connect list	Select a WAN connection to diagnose from the list.
IP or domain name	Enter the IP address or domain name.
Ping	Select this toggle button to enable ping.

Table 7-32 Diagnostics parameters (continued)

Field	Description
Traceroute	Select this toggle button to enable traceroute.
Ping try times	Enter the number of ping attempts. This field is enabled only if you select the Ping toggle button. Allowed values: 1 to 1000 Default value: 4
Packet length	Enter a packet length. Allowed values: 64 to 1500 Default value: 64
Max number of trace hops	Enter the maximum number of trace hops. This field is enabled only if you select the Traceroute toggle button. Allowed values: 1 to 255 Default value: 30

3

Click **Start test** to start the test. Results are displayed at the bottom of the page.

PING 192.168.18.10 (192.168.18.10): 64 data bytes 72 bytes from 192.168.18.10: seq=0 ttl=64 time=49.398 ms 72 bytes from 192.168.18.10: seq=1 ttl=64 time=75.414 ms

72 bytes from 192.168.18.10: seq=2 ttl=64 time=102.160 ms

72 bytes from 192.168.18.10: seq=3 ttl=64 time=123.691 ms

--- 192.168.18.10 ping statistics ---

4 packets transmitted, 4 packets received, 0% packet loss

round-trip min/avg/max = 49.398/87.665/123.691 ms

Figure 7-54 Example of traceroute results

traceroute to 192.168.18.10 (192.168.18.10), 30 hops max, 64 byte packets

1 192.168.18.10 52.241 ms 5.023 ms 3.396 ms

END OF STEPS

7.46 Viewing Log Files

1

Click **Maintenance**→**Log** in the left pane. The *Log* page displays.

Figure 7-55 Log page



2

Configure the following parameters:

Table 7-33 Log parameters

Field	Description	
Writing level	Select a writing level from the list to determine the event types recorded in the log file:	
	• Emergency	
	• Alert	
	• Critical	
	• Error	
	• Warning	
	• Notice	
	Informational	
	• Debug	
Reading level	Select a reading level from the list to determine the event types displayed in the log file:	
	• Emergency	
	• Alert	
	• Critical	
	• Error	
	• Warning	
	• Notice	
	Informational	
	• Debug	

Click Save. The log file is displayed at the bottom of the page.

Click Export log to download the log file to your PC. The filename of the log is onu_info.log.

END OF STEPS

7.47 Viewing Container Management

1

Click **Maintenance**—**Container management** in the left pane. The *Container management* page displays.

Figure 7-56 Container management page



2 -

Configure the following parameters:

Table 7-34 Container management parameters

Field	Description
App name	Indicates the name of the application.
Version	Indicates the version of the application.
Status	Displays the status of the application: • Active • Idle

END OF STEPS -

Troubleshooting

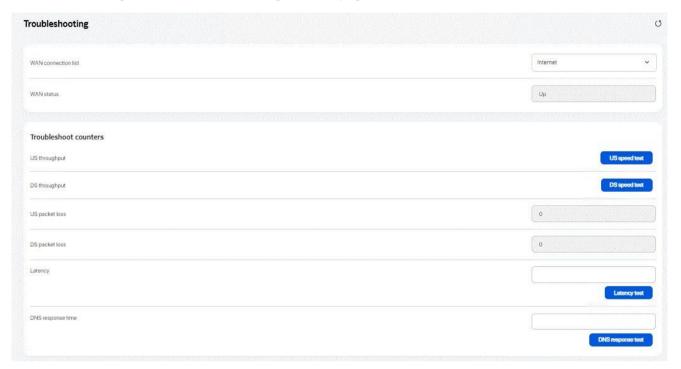
7.48 Troubleshooting counters

The Troubleshooting counters feature enables service providers and end users to monitor the performance of their broadband connection for about 10 seconds from the time the test is triggered.

Tests are run to retrieve upstream and downstream throughput, latency, and DNS response time. The Troubleshooting counters page also displays upstream and downstream packet loss and Internet status.

Click **Troubleshooting** → **Troubleshooting counters** in the left pane. The *Troubleshooting counters* page displays.

Figure 7-57 Troubleshooting counters page



2

Configure the following parameters:

Table 7-35 Troubleshooting counters parameters

Field	Description	
WAN Connection List	Select a WAN connection from the list.	
WAN Status	Displays the WAN status: • Up • Down	
Troubleshoot counters		
US throughput	This test is used to determine the upstream throughput/speed. Click US speed test to specify the time for the upstream test.	
DS throughput	This test is used to determine the downstream throughput/speed. Click DS speed test to specify the time for the downstream test.	
US packet loss	Displays the number of upstream packages lost.	
DS packet loss	Displays the number of downstream packages lost.	
Latency	This test is used to determine the lowest round-trip time in milliseconds by pinging the target server multiple times. Click Latency test to specify the time for the test.	
DNS response time	This test is used to determine the lowest round-trip time in milliseconds by sending a request to the target DNS server. Click DNS response test to specify the time for the test.	
Port mirrors		
Source port	Select a source port for port mirroring from the list.	
Destination port	Select a destination port for port mirroring from the list.	
Direction	Select a direction from the list: • Upstream • Downstream	
Status	Select a port mirroring status from the list: • Enable	

Click Save.

END OF STEPS -

7.49 **Viewing Speed Test**

Click **Troubleshooting**→**Speed test** in the left pane. The *Speed test* page displays.



Table 7-36 Speed test parameters

Field	Description
Upload speed	Displays the upload speed.
Download speed	Displays the download speed.
Latency	Displays the latency.

2

Click Start test to start the speed test.

END OF STEPS -