



AXXESSMARINE



PEPWAVE UBR WITH SIM INJECTOR USER GUIDE

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SUMMARY

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PEPWAVE UBR RUGGED LTEA

Monitor SIM Card Status

To access the Pepwave UBR Rugged dashboard, type your gateway on your browser and fill user/password to access the Pepwave's main page.

The screenshot displays the Pepwave UBR Rugged LTEA dashboard. The top navigation bar includes 'PEPWAVE', 'Dashboard', 'Network', 'Advanced', 'AP', 'System', and 'Status', along with an 'Apply Changes' button. The main content area is divided into several sections:

- WAN Connection Status:** Shows Priority 1 (Highest) with 'Injector slot 1' connected to AT&T LTE. Priority 2 is currently empty, with a note to 'Drag desired (Priority 2) connections here'. Below this, several WAN connections are listed as 'Disabled': WAN, Injector slot 3, Wi-Fi WAN on 2.4 GHz, and Wi-Fi WAN on 5 GHz. Each entry has a 'Details' button.
- LAN Interface:** Shows the Router IP Address as 192.168.31.1.
- Wi-Fi AP:** Shows the Wi-Fi AP is currently 'ON'.
- Device Information:** Provides details about the device:
 - Model: Pepwave UBR Rugged LTE-A
 - Firmware: 8.0.2s013 build 4417
 - Uptime: 3 days 17 hours 1 minute
 - CPU Load: 0%
 - Throughput: 553.0 kbps (down) / 580.0 kbps (up)

This shows the Status for your connections like the carrier, state, signal level and 3G/LTE/LTE-A.

Click on Details and you can see important information about your Cellular Connections.

The screenshot shows the 'WAN Connection Settings' configuration page. The settings are as follows:

- WAN Connection Name:** Cellular 2 (Default)
- Routing Mode:** NAT
- DNS Servers:**
 - Obtain DNS server address automatically
 - Use the following DNS server address(es)
 - DNS Server 1: []
 - DNS Server 2: []
- Independent from Backup WANs:**
- Standby State:** Remain connected Disconnect
- Idle Disconnect:**
- Reply to ICMP Ping:** Yes No

As the system also has a SIM Injector, you can see which SIM card is currently used.

Cellular Settings

Cellular Settings		
SIM Card	<input type="radio"/> Both SIMs <input type="radio"/> SIM A Only <input type="radio"/> SIM B Only <input type="radio"/> Alternate periodically between SIM A Only and SIM B Only <input checked="" type="radio"/> Use Remote SIM Only	
Remote SIM Settings	<input type="text" value="392C-0487-E10B"/> <input type="button" value="Scan nearby remote SIM server"/>	
	SIM Card A	SIM Card B
Carrier Selection	<input checked="" type="radio"/> Auto	<input checked="" type="radio"/> Auto
LTE/3G	Auto	Auto
Band Selection	Auto	Auto
Data Roaming	<input type="checkbox"/> Any countries <input type="text" value="Enter Mobile Country Codes (each separated by space)"/>	<input type="checkbox"/> Any countries <input type="text" value="Enter Mobile Country Codes (each separated by space)"/>
Authentication	Auto	Auto
Operator Settings	<input checked="" type="radio"/> Auto <input type="radio"/> Custom	<input checked="" type="radio"/> Auto <input type="radio"/> Custom
APN	<input type="text"/>	<input type="text"/>
Username	<input type="text"/>	<input type="text"/>
Password	<input type="text"/>	<input type="text"/>
Confirm Password	<input type="text"/>	<input type="text"/>

Scrolling down this page, you can change some settings as you want and change when you change the SIM Card inside SIM Injector. To do this, check which slot is allocated the SIM card and change the number in **Remote SIM Settings**.

You can change or chose a specifically carrier clicking on  and "[here](#)" and select the carrier. This process takes about 2 minutes to show all the carriers near the antennas.

You can use 2 SIM cards at the same time doing the same protocol above to Cellular 2.

All changes must be **saved** and **applied**.

If you need some information inside SIM Injector, go to **Status, Client List**, copy the address from SIM Injector at the list and past in your browser.

PEPWAVE																															
Dashboard	Network	Advanced	AP	System	Status	Apply Changes																									
Status <ul style="list-style-type: none"> Device Active Sessions Client List OSPF & RIPv2 BGP Event Log 																															
Filter		<input type="checkbox"/> Online Clients Only <input type="checkbox"/> DHCP Clients Only																													
Client List <table border="1"> <thead> <tr> <th>IP Address</th> <th>Name</th> <th>Download (kbps)</th> <th>Upload (kbps)</th> <th>MAC Address</th> <th>Network Name (SSID)</th> <th>Signal (dBm)</th> <th>Import</th> </tr> </thead> <tbody> <tr> <td>192.168.31.102</td> <td>SIM_INJ_E10B</td> <td>0</td> <td>0</td> <td>D8:F1:F0:B0:09:0E</td> <td></td> <td></td> <td></td> </tr> <tr> <td>192.168.31.103</td> <td>mfa-414e</td> <td>432</td> <td>521</td> <td>10:56:CA:0D:74:05</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								IP Address	Name	Download (kbps)	Upload (kbps)	MAC Address	Network Name (SSID)	Signal (dBm)	Import	192.168.31.102	SIM_INJ_E10B	0	0	D8:F1:F0:B0:09:0E				192.168.31.103	mfa-414e	432	521	10:56:CA:0D:74:05			
IP Address	Name	Download (kbps)	Upload (kbps)	MAC Address	Network Name (SSID)	Signal (dBm)	Import																								
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192.168.31.103	mfa-414e	432	521	10:56:CA:0D:74:05																											

The login and password are **admin / admin**.

Network Settings

In this session, you can create and manage your Virtual LANs to define some settings and controls within your network.

Go to **Network**, **Network Settings** and you can see your Virtual LANs.

The screenshot shows the PEPWAVE Network Settings page. The left sidebar has 'LAN' selected, with 'Network Settings' expanded. The main content area shows a notification: 'This configuration is being managed by InControl.' Below this is a table of Virtual LANs:

LAN	VLAN	Network	
Untagged LAN	None	192.168.50.1/24	
Management VLAN	1	10.0.1.1/24	✖
			✖

At the bottom of the table is a 'New LAN' button.

The screenshot shows the detailed configuration for a LAN. The left sidebar has 'LAN' selected, with 'Network Settings' expanded. The main content area shows the following configuration sections:

- IP Settings:** IP Address: 192.168.50.1, Subnet: 255.255.255.0 (/24)
- Network Settings:** Name: (empty), Inter-VLAN routing:
- Drop-In Mode Settings:** Enable:
- DHCP Server:**
 - DHCP Server: Enable
 - DHCP Server Logging:
 - IP Range: (empty) - (empty) 255.255.255.0 (/24)
 - Lease Time: 1 Days 0 Hours 0 Mins
 - DNS Servers: Assign DNS server automatically
 - WINS Servers: Assign WINS server
 - BOOTP:
 - Extended DHCP Option: (empty) Add
 - DHCP Reservation: (empty) +

Note: you can link a **VLAN** to a specifically **SSID**. To do this, click on menu **AP**, go to **Wireless SSID** and select a desired VLAN.

The screenshot shows the PEPWAVE AP Wireless SSID configuration page. The left sidebar has 'AP' selected, with 'Wireless SSID' expanded. The main content area shows the following configuration sections:

- SSID Settings:**
 - SSID: (empty)
 - Enable: Always on
 - VLAN: Untagged LAN
 - Broadcast SSID:
- Security Settings:**
 - Security Policy: WPA/WPA2 - Personal
 - Encryption: TKIP/AES:CCMP
 - Shared Key: (empty) Hide Characters:
 - Management Frame Protection: Default (Disabled)

All changes must be **saved** and **applied**.

Outbound Policy

You can define customized rules to manage the outbound traffic behavior. The rule Default will be applied to traffic that does not match with any higher precedence rules.

Service	Algorithm	Source	Destination	Protocol / Port
HTTPS Persistence	Persistence (Src) (Auto)	Any	Any	TCP 443
Default			(Auto)	

This table allows you to fine tune how the outbound traffic should be distributed to the WAN connections.

Click the Add Rule button to add a new rule or the existent rule to make changes.

This field allows you to choose the WAN selection algorithm.

Weighted Balance - Traffic will be proportionally distributed among available WAN connections according to the specified load distribution weight;

Persistence - Traffic coming from the same machine will be persistently routed through the same WAN connection;

Enforced - Traffic will be routed through the specified connection regardless of the connection's health status;

Priority - Traffic will be routed through the healthy connection that has the highest priority;

Overflow - Traffic will be routed through the healthy WAN connection that has the highest priority and is not in full load. When this connection gets saturated, new sessions will be routed to the next healthy WAN connection that is not in full load;

Least Used - Traffic will be routed through the healthy WAN connection that is selected in the field Connection and has the most available downlink bandwidth;

Lowest Latency - Latency checking packets will be periodically sent to all selected healthy connections. Latency will then be determined by the response time of the second and third hops. New traffic will then be routed to a healthy connection with the lowest average latency during that detection period;

Fastest Response Time - Traffic will be duplicated and sent to all selected healthy connections. The connection with the earliest response will be used to send all further traffic from the session for the fastest possible response time. If there are any slower responses received from other connection afterwards, they will be discarded. As a result, this algorithm selects the most responsive connection on a per session basis.

Access Rules

You can create rules to deny an internet group or a specifically person. To do this, go to **Advanced, Access Rules, Internal Network Firewall Rules** and click on **Add Rule**.

PEPWAVE Dashboard SpeedFusion Cloud Network **Advanced** AP System Status Apply Changes

- Advanced
 - SpeedFusion
 - IPsec VPN
 - GRE Tunnel
 - Outbound Policy
 - Port Forwarding
- NAT Mappings
- QoS
 - User Groups
 - Bandwidth Control
 - Application
- Firewall
 - Access Rules**
 - Content Blocking
- Routing Protocols
 - OSPF & RIPv2
 - BGP
- Remote User Access
- Misc. Settings

Outbound Firewall Rules (Drag and drop rows by the left to change rule order) ?

Rule	Protocol	Source	Destination	Action
Default	Any	Any	Any	✓

Add Rule

Inbound Firewall Rules (Drag and drop rows by the left to change rule order) ?

Rule	Protocol	WAN	Source	Destination	Action
Default	Any	Any	Any	Any	✓

Add Rule

Internal Network Firewall Rules (Drag and drop rows by the left to change rule order) ?

Rule	Protocol	Source	Destination	Action
Default	Any	Any	Any	✓

Add Rule

Intrusion Detection and DoS Prevention ?

Disabled ✎

Local Service Firewall Rules (Drag and drop rows by the left to change rule order) ?

Rule	Service	WAN	Source	Action
Default	Any	Any	Any	✓

Add Rule

You can create a rule to block crew to use internet, for example.

Content Blocking

Choose applications to be blocked from LAN/PPTP/PepVPN peer clients' access, except for those on the Exempted User Groups or Exempted Subnets defined below.

You can block Audio/Video Streaming, Pornography, Database, Email, File Sharing and others applications into the Pepwave. To do this, click on **Advanced, Content Blocking**, mark the applications and categories, mark or unmark the exempted users and/or groups.

To Block a specifically website, you should click on **Customized Domains**, fill with the domain. Examples: **facebook.* youtube.*** and click on .

All changes must be **saved** and **applied**.

Example: How to block **Netflix** to **Crew Network**:

Go to **Advanced, Content Blocking** and in the session **Customized Domains**, type:

nflximg.*

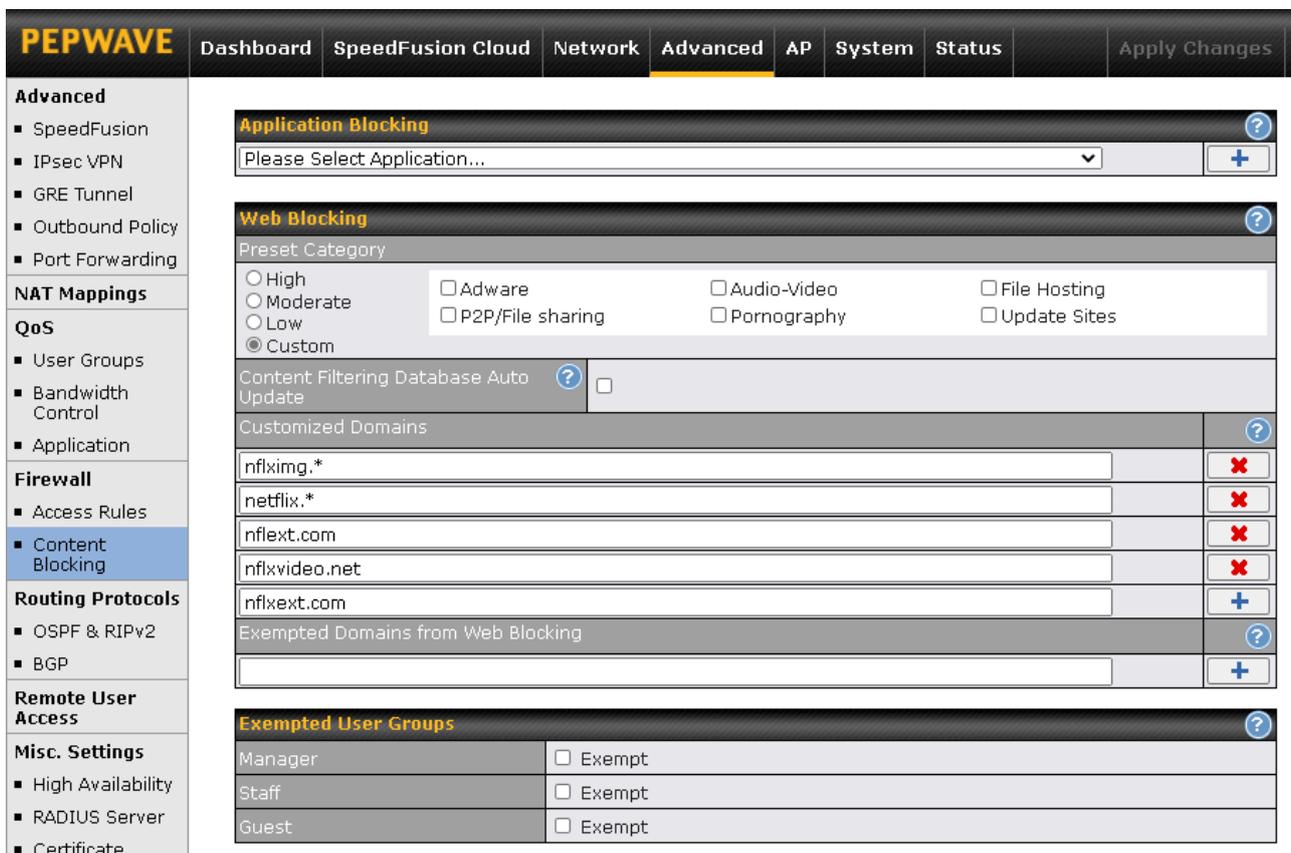
netflix.*

nflex.com

nflxvideo.net

nflxext.com

Mark **Manager** and **Guest** as **Exempted User Groups**, **Save** and click on **Apply Changes**.



PEPWAVE Dashboard SpeedFusion Cloud Network **Advanced** AP System Status Apply Changes

Advanced

- SpeedFusion
- IPsec VPN
- GRE Tunnel
- Outbound Policy
- Port Forwarding

NAT Mappings

QoS

- User Groups
- Bandwidth Control
- Application

Firewall

- Access Rules
- Content Blocking**

Routing Protocols

- OSPF & RIPv2
- BGP

Remote User Access

Misc. Settings

- High Availability
- RADIUS Server
- Certificate

Application Blocking

Please Select Application... 

Web Blocking

Preset Category

High Adware Audio-Video File Hosting

Moderate P2P/File sharing Pornography Update Sites

Low Custom

Content Filtering Database Auto Update 

Customized Domains 

nflximg.*	
netflix.*	
nflex.com	
nflxvideo.net	
nflxext.com	

Exempted Domains from Web Blocking 

	
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Exempted User Groups 

Manager	<input type="checkbox"/> Exempt
Staff	<input type="checkbox"/> Exempt
Guest	<input type="checkbox"/> Exempt

Bandwidth Control

Using the Pepwave you can define how much minimum bandwidth will be reserved to each user group when a WAN connection is in full load **or/and** you can define a maximum download speed will be reserved for each WAN connection to Guest/Crew (owner no limit).

To do this, you need to know your VLANs and IP Addresses and go to **Advanced, User Groups, Add** and in **Grouped by** mark **Subnet** and fill the IP Address from Owner/Crew/Guest and mark as Manager/Staff/Guest respectively. Example:

The screenshot shows the 'Add / Edit User Group' configuration window in the Pepwave interface. The 'Grouped by' dropdown is set to 'Subnet', the IP address is '192.168.1.1', and the mask is '255.255.255.0 (/24)'. The 'Group' dropdown is set to 'Manager'. There are 'Save' and 'Cancel' buttons at the bottom right.

These settings mean the IP addresses 192.168.1.1/24 will follow the bandwidth rules as Manager (Normally Owner - no limit by default).

After to defining all groups, click on **Bandwidth Control** and check the best option for you and change the settings according to your needs. Example:

The screenshot shows the 'Bandwidth Control' configuration page in the Pepwave interface. The 'Group Bandwidth Reservation' checkbox is unchecked, and the 'Individual Bandwidth Limit' checkbox is checked. The 'User Bandwidth Limit' table shows settings for Manager, Staff, and Guest.

User Bandwidth Limit	Download		Upload		
	Manager	Staff	Manager	Staff	
Manager	Unlimited	Unlimited	Unlimited	Unlimited	(0: Unlimited)
Staff	0	0	0	0	Mbps (0: Unlimited)
Guest	0	0	0	0	Mbps (0: Unlimited)

There is a 'Save' button at the bottom center.

All changes must be **saved** and **applied**.

Monitoring the network

In this session you can see the list of all clients accessing from LAN, Wi-Fi AP and assign a name to a client by clicking on the Name field of the client and inputting a name.

Go to **Status**, **Client List** and you can see all the users online and offline, you can monitor the real time speed of the different users on the networks and rename devices if necessary.

PEPWAVE Dashboard SpeedFusion Cloud Network Advanced AP System **Status** Apply Changes

Status

- Device
- Active Sessions
- Client List**
- OSPF & RIPv2
- BGP
- Event Log

WAN Quality

Usage Reports

- Real-Time
- Hourly
- Daily
- Monthly

Filter Online Clients Only DHCP Clients Only

Client List

IP Address	Name	Download (kbps)	Upload (kbps)	MAC Address	Network Name (SSID)	Signal (dBm)
		941	73			
		0	0			
		0	0			

Scale: kbps Mbps

A good way to monitor customers and Crew is to name the IP address, see image below how to do this.

PEPWAVE Dashboard SpeedFusion Cloud Network Advanced AP System **Status** Apply Changes

Status

- Device
- Active Sessions
- Client List**
- OSPF & RIPv2
- BGP
- Event Log

WAN Quality

Usage Reports

- Real-Time
- Hourly
- Daily
- Monthly

Filter Online Clients Only DHCP Clients Only

Client List

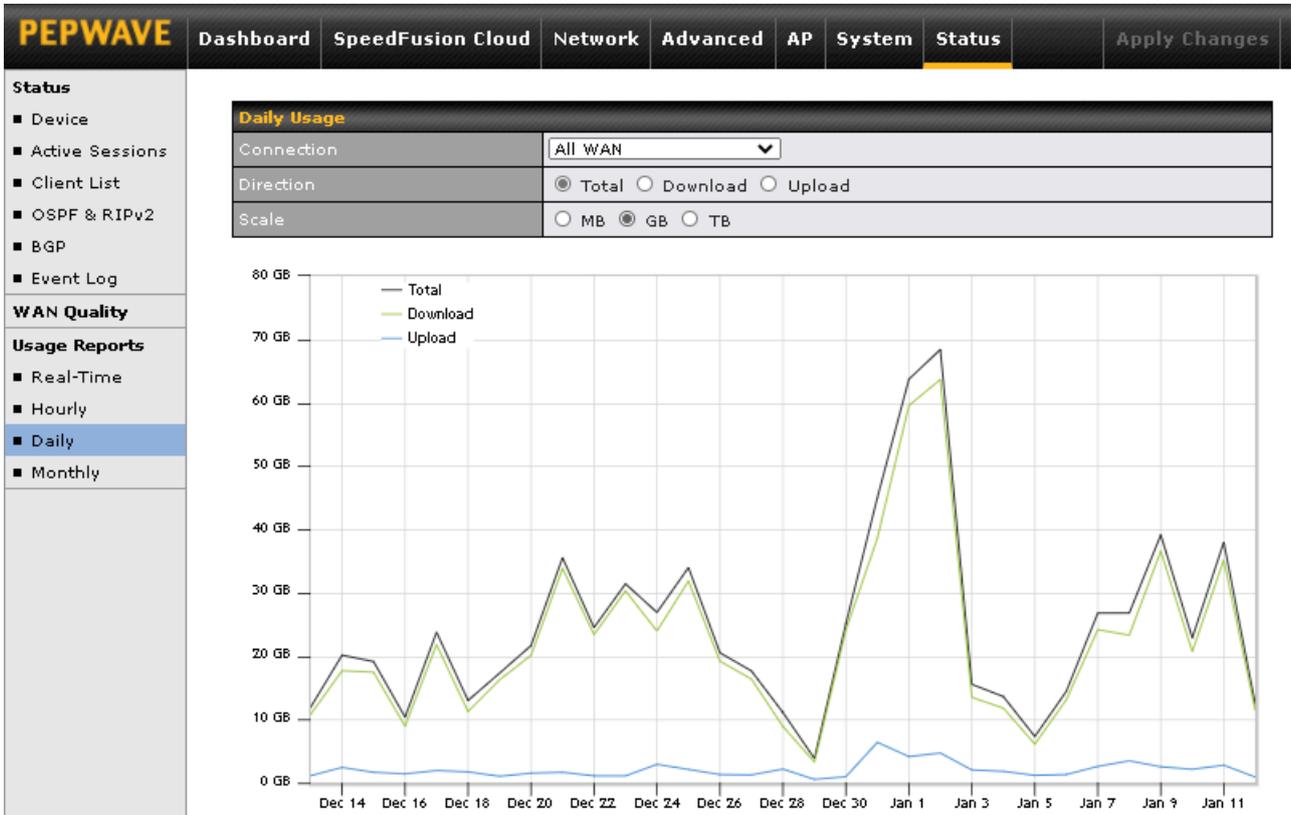
IP Address	Name	Download (kbps)	Upload (kbps)	MAC Address	Network Name (SSID)	Signal (dBm)
		262	73			
	SIM INJECTOR	0	0			
		56	23			

Scale: kbps Mbps

Usage Reports

Your Pepwave is able to show you all the internet usage in different times (Real time, Hourly, Daily and Monthly). You can see how much download each user made in these different times. To see these informations, go to **Status** and click on **Real time**, **Hourly**, **Daily** or **Monthly**.

Example: You click in **Daily** and see a usage graph:



Scrolling down and you see the usage total per day (figure below left), clicking in a day, you can see details about this day (figure below right):

Date	Download	Upload	Total
2021-01-12	11.48 GB	0.93 GB	12.41 GB
2021-01-11	35.2 GB	2.8 GB	38 GB
2021-01-10	20.73 GB	2.16 GB	22.89 GB
2021-01-09	36.59 GB	2.55 GB	39.14 GB
2021-01-08	23.31 GB	3.49 GB	26.81 GB
2021-01-07	24.19 GB	2.61 GB	26.8 GB
2021-01-06	13.13 GB	1.33 GB	14.46 GB
2021-01-05	6.13 GB	1.2 GB	7.33 GB
2021-01-04	11.8 GB	1.83 GB	13.63 GB
2021-01-03	13.5 GB	2.05 GB	15.56 GB
2021-01-02	63.67 GB	4.72 GB	68.39 GB
2021-01-01	59.55 GB	4.16 GB	63.71 GB
2020-12-31	38.63 GB	6.41 GB	45.04 GB
2020-12-30	24.14 GB	0.99 GB	25.13 GB
2020-12-29	3.29 GB	0.56 GB	3.86 GB
2020-12-28	8.92 GB	2.19 GB	11.12 GB
2020-12-27	16.39 GB	1.27 GB	17.67 GB
2020-12-26	19.21 GB	1.33 GB	20.54 GB
2020-12-25	31.86 GB	2.13 GB	33.99 GB
2020-12-24	23.97 GB	2.94 GB	26.91 GB
2020-12-23	30.31 GB	1.11 GB	31.42 GB
2020-12-22	23.4 GB	1.12 GB	24.52 GB
2020-12-21	33.85 GB	1.68 GB	35.54 GB
2020-12-20	20.13 GB	1.54 GB	21.67 GB
2020-12-19	16.27 GB	1.05 GB	17.32 GB
2020-12-18	11.26 GB	1.75 GB	13.01 GB
2020-12-17	21.83 GB	1.96 GB	23.79 GB
2020-12-16	8.96 GB	1.43 GB	10.39 GB
2020-12-15	17.47 GB	1.68 GB	19.15 GB
2020-12-14	17.71 GB	2.45 GB	20.17 GB
2020-12-13	10.81 GB	1.14 GB	11.94 GB

Current Month			
Down	319.29 GB		
Up	29.83 GB		
Total	349.12 GB		

2021-01-12					
Client Usage		PepVPN Usage			
IP Address	MAC	Type	Download	Upload	Total
		LAN Client	22.0 Kb	11.0 Kb	33.0 Kb
		LAN Client	11.1 GB	883 MB	11.9 GB
		LAN Client	410 MB	41.3 MB	451 MB

** If you want to make changes, we are here (Support Phone and [Portal](#)) to help if you have problems. But also if you want to change something, you can always ask us and we can do it remotely.*