



Time Sensitive Information!

These Configuration Changes Must Be Applied
Ten Days Prior to Absolute VOICE Cut-Over

Peplink – Pepwave MX BRI Mini Router Configuration
For Absolute VOICE Cloud Telephony Deployment
Document Version 1.0

October 18st, 2018

www.callabsolute.com

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Read Me!

1. These changes must be applied before client implements their Absolute VOICE hosted telephony solution.
2. If you are experienced with business class firewalls and routers, please have your IT staff/contractor perform these changes for you.
3. Please read this entire document before attempting to make any changes.
4. If you have questions about this document, you can call 800-955-6703 to schedule an appointment with one of our firewall support specialists. We will attempt schedule your appointment within 24- 48 hours of your call to us so please allow adequate time.
5. After changes are completed please let your client or Absolute VOICE Customer Support specialist know.
6. Once completed, an Absolute VOICE technician will be requesting access or a collaborative web session to verify settings prior to customer cut over.

Introduction

This document is for IT administrators and illustrates configuration changes required on Peplink firewall & router appliances to support Absolute VOICE's cloud communications telecommunications platform. This document assumes a basic network deployment consisting of one internal LAN network containing the IP phones and one WAN network connected to the Internet. While we strongly recommend a dedicated network for VoIP traffic, the instructions below can be used for a “converged” network whereby both VoIP and non-VoIP traffic share one physical WAN network. With basic modifications (such as adding access rules for additional interfaces); this configuration can be extrapolated for other network layouts. The screenshots below may vary slightly from what is displayed while configuring the device depending on model and software version. Setting values not mentioned may be left at default or changed as required for specific purposes.



Please call Absolute VOICE Customer Support at 800-955-6703 if you need any further information. Firewall changes can be in depth and you will need to schedule time with one of our specialists if you need assistance.

Screenshots and instructions are based on Pepwave BRI running Software Version 7.1.1 build 3102.

We recommend loading the latest software version (firmware).

Firewall Checklist

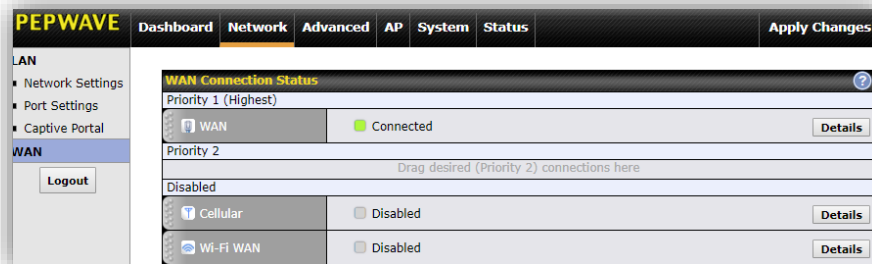
Please provide screen shots to Absolute for verification of settings. This will allow the implementation process to be smooth and ensure quality audio and proper signaling.

Screen Shot #:	Configuration:	Completed:
1	Network → WAN → Priority	
2	Network → WAN → Bandwidth	
3	Network → WAN → MTU Size	
4	Advanced → Misc Settings → Service Passthrough (SIP Compatibility)	
5	Advanced → QoS → Application (QoS)	
6	Advanced → QoS → Bandwidth Control	
7	Health Check - Disabled	

WAN Setup

Network → WAN

Note: Please set the WAN (broadband) interface as Primary and if there is a secondary WAN interface, please set it as a Priority 2 Status. VoIP will not work correctly with load balancing WAN interfaces.



- Once the WAN interface is set, click the “Details” button.
- Set the Upload and Download speeds to the internet contracted speeds.

The screenshot shows the WAN Connection Settings page with the following configuration:

WAN Connection Name	WAN	Default
Connection Method	DHCP	
Routing Mode	NAT	
Hostname (Optional)	Use custom hostname	
DNS Servers	<input checked="" type="checkbox"/> Obtain DNS server address automatically 1.1.1.1 8.8.8.8 10.3.7.26 <input type="checkbox"/> Use the following DNS server address(es) DNS Server 1: DNS Server 2:	
IP Passthrough	<input type="checkbox"/>	
Independent from Backup WANS	<input type="checkbox"/>	
Standby State	<input checked="" type="radio"/> Remain connected <input type="radio"/> Disconnect	
Reply to ICMP PING	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Upload Bandwidth	2	Mbps
Download Bandwidth	20	Mbps

- Set the “MTU size” to 1500
- Click “Save and Apply.”

The screenshot shows the Physical Interface Settings page with the following configuration:

Port Speed	Auto
MTU	<input type="radio"/> Auto <input checked="" type="radio"/> Custom Value: 1500
MSS	<input checked="" type="radio"/> Auto <input type="radio"/> Custom Value:
MAC Address Clone	00:1A:DD:59:A5:01
WAN	<input type="checkbox"/>

Disable SIP – ALG

Advanced → Misc Settings → Service Passthrough

- Please disable SIP ALG by selecting “Compatibility Mode.”
- Click “Save”

The screenshot shows the PEPWAVE web interface with the 'Advanced' tab selected. The left sidebar lists various settings categories, with 'Service Passthrough' highlighted under 'Misc. Settings'. The main content area displays the 'Service Passthrough Support' configuration table.

Service Passthrough Support	
SIP	<input type="radio"/> Standard Mode <input checked="" type="radio"/> Compatibility Mode <input type="checkbox"/> Define custom signal ports
H.323	<input type="checkbox"/> Enable
FTP	<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Define custom control ports
TFTP	<input type="checkbox"/> Enable
IPsec NAT-T	<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Define custom ports <input type="checkbox"/> Route IPsec Site-to-Site VPN

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Setup QoS and Traffic Shaping

Advanced → QoS → Application

- Click the “Add” button under the “Application” section

The screenshot shows the PEPWAVE web interface. The top navigation bar includes Dashboard, Network, Advanced (selected), AP, System, and Status. The left sidebar lists various configuration sections: Advanced (SpeedFusion, IPsec VPN, Outbound Policy, Port Forwarding), NAT Mappings, QoS (Bandwidth Control, Application (selected)), and Firewall (Access Rules). The main content area is titled 'Advanced' and contains three sections: 'Application' with a table showing 'All Supported VoIP Protocols' and 'High' priority, an 'Add' button, 'DSL/Cable Optimization' with an 'Enable' checkbox, and 'PepVPN Traffic Optimization' with an 'Enable' checkbox. A 'Save' button is at the bottom right.

- Choose “Audio Video Streaming” from Category sections.
- Choose “All Supported Streaming Applications” from Application section.
- Click “OK”
- Then set the “Priority” to “High.”
- Click “Save”

The screenshot shows the 'Add / Edit Application' dialog box. It has a title bar with a close button. The dialog contains three fields: 'Type' with a dropdown menu showing 'Supported Applications' (selected) and 'Custom Applications'; 'Category' with a dropdown menu showing 'Audio Video Streaming' (selected); and 'Application' with a dropdown menu showing 'All Supported Streaming Applications' (selected). At the bottom right are 'OK' and 'Cancel' buttons.

Setup QoS and Traffic Shaping

Advanced → QoS → Bandwidth Control

- Enable “Bandwidth Limit”
- Set the “Bandwidth Limit’s” download and upload speeds to the internet’s contracted speed.
- Click Save

Individual Bandwidth Limit			
Enable	<input checked="" type="checkbox"/>		
User Bandwidth Limit	Download	Upload	
	10 Mbps	2 Mbps	(0: unlimited)

Save

Disable Health Check

Note: Disable this feature if it is causing interface drops and choppy audio.

Browse to <http://ipaddress/cgi-bin/MANGA/support.cgi>

Health Check Failure Simulation			
WAN	Enable	Disable	
Cellular	Enable	Disable	
Wi-Fi WAN	Enable	Disable	

Logical Health Check Info			
Connection	Result	Consecutive Count	Result History
WAN	PASS	2	
Cellular	PASS	38	

Document Revision History

Version	Reason for Change	Date
1.0 Draft	Initial Draft Document	October 18th, 2018