

## Time Sensitive Information!

## These Configuration Changes Must Be Applied Ten Days Prior to Norcom Solutions Group Cut-Over

Peplink – Pepwave MX BRI Mini Router Configuration For Norcom Solutions Group Cloud Telephony Deployment Document Version 1.0

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#### Read Me!

- 1. These changes must be applied before client implements their Norcom Solutions Group hosted telephony solution.
- 2. If you are <u>experienced</u> 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 877-667-2661 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 Norcom Solutions Group Customer Support specialist know.
- 6. Once completed, a Norcom Solutions Group 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 Norcom Solutions Group'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 Norcom Solutions Group Customer Support at 877-667-2661 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 Norcom Solutions Group for verification of settings. This will allow the implementation process to be smooth and ensure quality audio and proper signaling.

Screen Shot #:	Configuration:	<b>Completed:</b>
1	Network $\rightarrow$ WAN $\rightarrow$ Priority	
2	Network $\rightarrow$ WAN $\rightarrow$ Bandwidth	
3	Network $\rightarrow$ WAN $\rightarrow$ MTU Size	
4	Advanced → Misc Settings → Service Passthrough (SIP Compatibility)	
5	Advanced $\rightarrow$ QoS $\rightarrow$ Application (QoS)	
6	Advanced $\rightarrow$ QoS $\rightarrow$ 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.

PEPWAVE	Dashboard	Network	Advanced	АР	System	Status		Apply Changes
LAN								
Network Settings	WAN Co	nnection Sta	atus					?
Port Settings	Priority 1	(Highest)						 
Captive Portal	🗐 💷 WA			Connect	ted			Details
VAN	Priority 2							
Logout				Dra	g desired (	(Priority 2) con	nections here	
Logout	Disabled							
	👕 Cel			Disabled	ł			Details
	💿 Wi-	Fi WAN		Disabled	đ			Details

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

WAN Connection Name		WAN	Default
Connection Method	?	DHCP V	
Routing Mode	?	• NAT	
Hostname (Optional)		Use custom hostname	
DNS Servers		<ul> <li>Obtain DNS server address automatically 1.1.1.1 8.8.8.8 10.3.7.26</li> <li>Use the following DNS server address(es) DNS Server 1: DNS Server 2:</li> </ul>	]
IP Passthrough	?		
Independent from Backup WANs	?		
Standby State	?	Remain connected O Disconnect	
Reply to ICMP PING	?	● Yes ○ No	
Upload Bandwidth	?	2 Mbps ▼	
Download Bandwidth	?	20 Mbps 🔻	

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

Physical Interface Settings		
Port Speed (	?	Auto
MTU (	?	O Auto Custom Value: 1500 Default
MSS (	?	• Auto O Custom Value:
MAC Address Clone (	?	00 : 1A : DD : 59 : A5 : 01 Default
VLAN		



#### **Disable SIP – ALG**

#### Advanced $\rightarrow$ Misc Settings $\rightarrow$ Service Passthrough

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

PEPWAVE	Dashboard Network Advanced AP System Status Apply Changes
Advanced	
<ul> <li>SpeedFusion</li> </ul>	Service Passthrough Support
IPsec VPN	SIP      O Standard Mode      Compatibility Mode
<ul> <li>Outbound Policy</li> </ul>	Define custom signal ports
Port Forwarding	FTP P Finable
NAT Mappings	Define custom control ports
QoS	TFTP Enable
<ul> <li>Bandwidth Control</li> </ul>	IPsec NAT-T (?)  Enable Define custom ports Route IPsec Site-to-Site VPN
<ul> <li>Application</li> </ul>	(Registered trademarks are copyrighted by their respective owner)
Firewall	Save
<ul> <li>Access Rules</li> </ul>	
<ul> <li>Content Blocking</li> </ul>	
Routing Protocols	
<ul> <li>OSPF &amp; RIPv2</li> </ul>	
BGP	
Remote User Access	
Misc. Settings	
<ul> <li>High Availability</li> </ul>	
<ul> <li>Certificate Manager</li> </ul>	
<ul> <li>Service Forwarding</li> </ul>	
Service Passthrough	
- CDC Forwarding	



### Setup QoS and Traffic Shaping

#### Advanced $\rightarrow$ QoS $\rightarrow$ Application

• Click the "Add" button under the "Application" section

PEPWAVE	Dashboard	Network	Advanced	AP	System	Status
Advanced						
<ul> <li>SpeedFusion</li> </ul>	Applicati	on		Prior	ity	
IPsec VPN	All Suppo	rted VoIP Pro	otocols	↑ Hig	h '	
<ul> <li>Outbound Policy</li> </ul>						Add
Port Forwarding	DEL (Cal	lo Ontimiz-				
NAT Mappings		ie Opuiniza				
QoS	Enable					
<ul> <li>Bandwidth Control</li> </ul>	PepVPN	Traffic Opti	mization			
<ul> <li>Application</li> </ul>	Enable					
Firewall	]					Save
<ul> <li>Access Rules</li> </ul>						

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

	Supported Applications Custom Applications
Category	(2) Audio Video Streaming ▼
Application	All Supported Streaming Applications
	OK Cancel



## Setup QoS and Traffic Shaping

#### Advanced $\rightarrow$ QoS $\rightarrow$ Bandwidth Control

- Enable "Bandwidth Limit"
- Set the "Bandwidth Limit's" download and upload speeds to the internets contracted speed.
- Click Save

PEPWAVE	Dashboard	Network	Advanced	АР	System	Status	Apply Changes
Advanced							
SpeedFusion	Saved! (	Changes wil	l be effective	after	r clicking tl	e 'Apply Changes' button.	
IPsec VPN							
Outbound Policy	Individu	al Bandwid	th Limit				
Port Forwarding	Enable						
NAT Mappings	User Ban	dwidth Limit		Down	Mhna	Upload	unlimited)
QoS				10	mups		diminitedy
<ul> <li>Bandwidth Control</li> </ul>						Save	
<ul> <li>Application</li> </ul>							



#### **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

Cellular	Enable Disable							
Wi-Fi WAN	Enable Disable							
	the objection of the							
Logical Heal	th Check Info	Popult	Consecutive	Recult History	_	_	_	_
		T NESUT	TCONSECUTVE I	Result HISLOIV				



#### **Document Revision History**

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