Time Sensitive Information!

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

Cradlepoint IBR600 Router Configuration
For Absolute VOICE Cloud Telephony Deployment

Document Version 1.0

March 1, 2018

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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 Cradlepoint 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 OS 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 ***Cradlepoint IBR600 running v6.0.1.***

We recommend loading the latest Cradlepoint OS (firmware).

Firewall Checklist

After applying the configuration settings in this document, please take the appropriate screen shots to provide the firewall "verification" to Absolute.

The screen shots needed from the Cradlepoint GUI are listed in the below table:

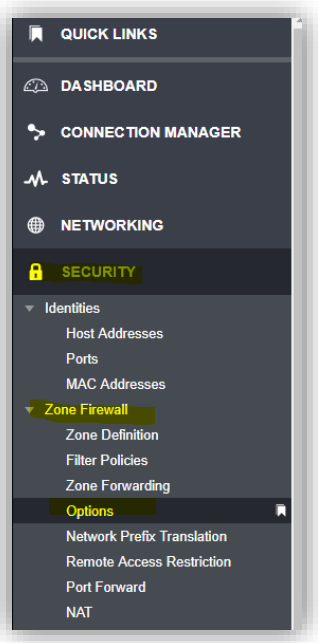
Screen Shot #:	Configuration:	Completed:
1	Security →Options (SIP disabled)	
2	Networking → QoS → WAN Profile	
3	Networking → QoS → Queue	
4	Networking → QoS → Rules	

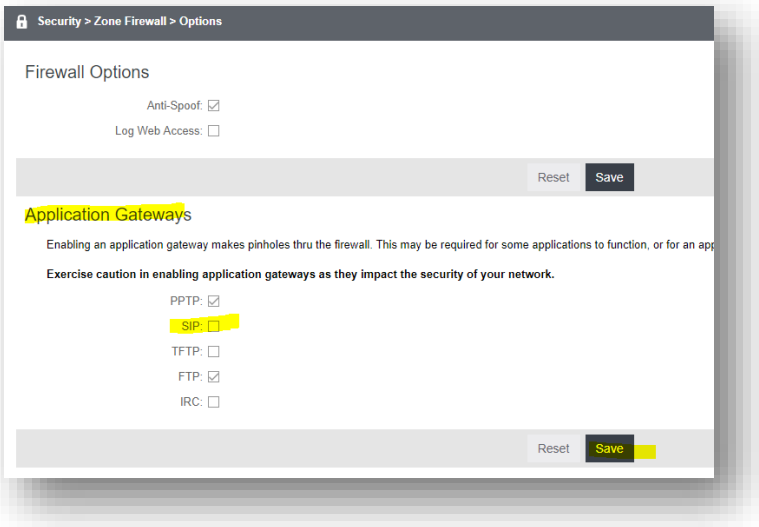
Disable SIP ALG

SIP ALG is used to try and avoid configuring Static NAT on a router. Its implementation, however, varies from one router to another, often making it difficult to inter-operate a router with SIP ALG enabled with a PBX. In general, you would want to disable SIP ALG and configure one to one port mapping on the router.

Note: Cradlepoint firewalls typically have SIP ALG disabled. Please verify this setting and disable if needed.

Security → Zone Firewall → Options





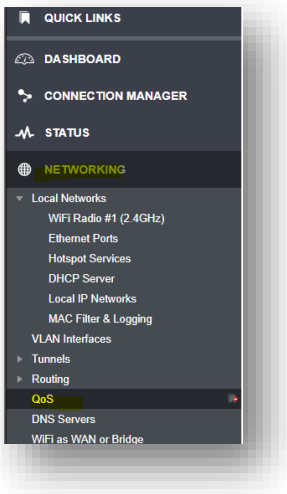
- Ensure SIP ALG is “unchecked”
- Click Save

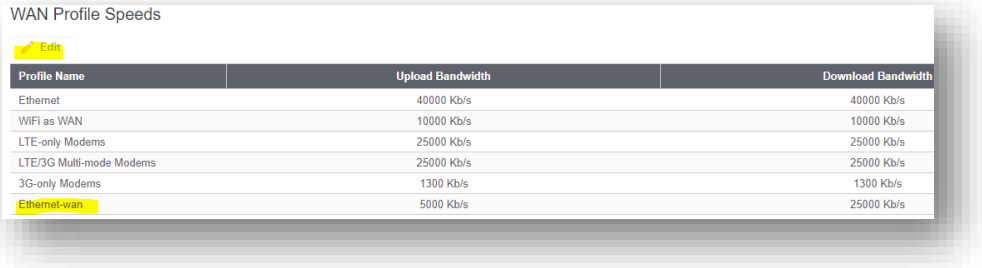
QoS - Shaping & Priority

The Traffic Shaper will allow a defined set of traffic to a particular priority (QoS) level and guarantee/shape need bandwidth with the VoIP traffic.
Below is assuming only an Ethernet handoff is being used for ISP demark.

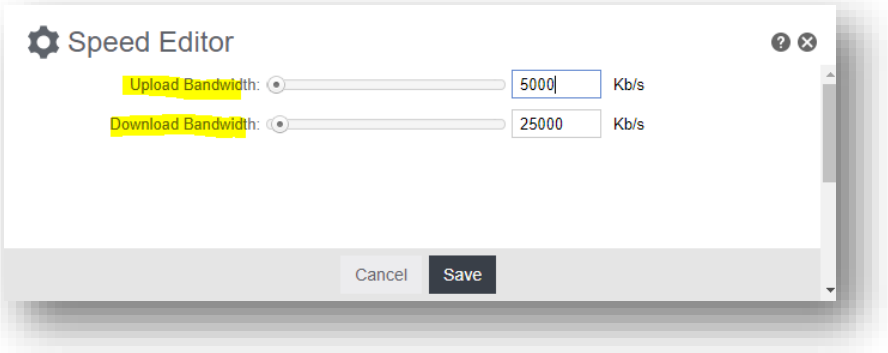
Networking → QoS

WAN Profile Speeds:



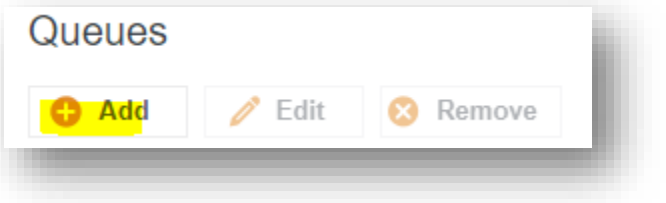


- Edit the <u>WAN Profile Speeds</u>:
  - Highlight the Ethernet-Wan profile
  - Click "Edit"
  - Enter your contracted internet speed for upload and download
    - Please note that the speed is in Kb/s, examples shown below:
      - 1mbps = 1000Kb/s
      - 25mbps = 25000Kb/s
    - Click Save



Networking → QoS

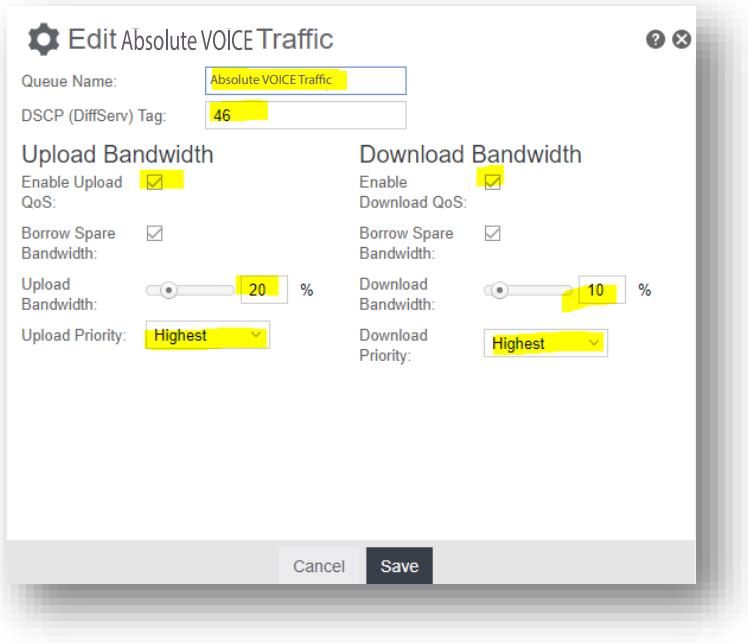
QUEUES:



- Create a new Queue
    - Click the "Add" button and enter the following information:

Queue Name:	Absolute VOICE Traffic
DSCP (DffServ):	45
Enable Upload QoS:	Checked
Upload Bandwidth:	Set to the % you would like to dedicate to VoIP traffic
Upload Priority:	Highest
Enable Download QoS:	Checked
Download Bandwidth:	Set to the % you would like to dedicate to VoIP traffic
Download Priority:	Highest

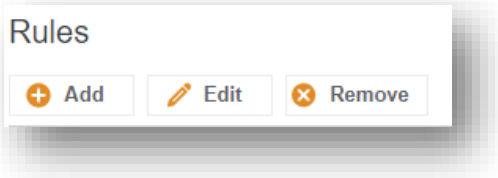
    - Click Save



        - Note: Typically we calculate how approximately much bandwidth by the following formula:
            - 100Kbps x (# of phones per site) = bandwidth needed each direction
            - I.E. 100Kbps x 10phones= 1000Kbps (or 1Mbps)

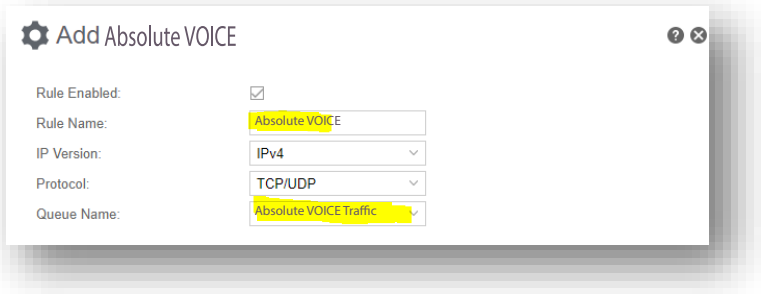
Networking → QoS

RULES:



- Create a new Rule
    - Click the “Add” button and enter the following information:
        - Click Next

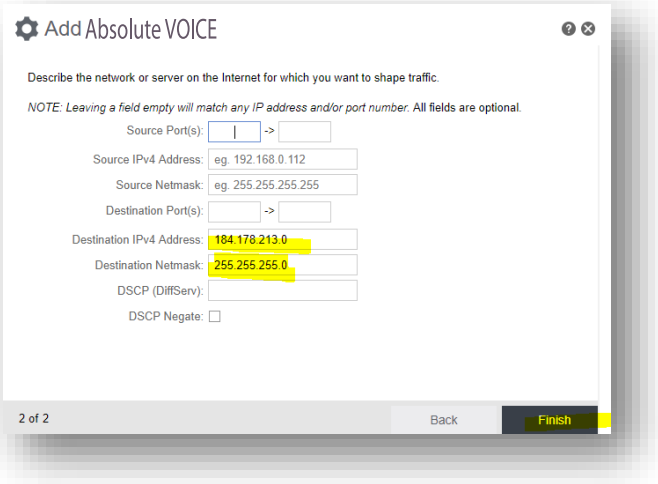
Rule Name:	Absolute VOICE
Protocol:	TCP/UDP
Queue Name:	Absolute VOICE Traffic (created in previous step)



- Leave fields default except fields below:

Destination IPv4:	184.178.213.0
Destination Netmask:	255.255.255.0

- Click Finish



Document Revision History

Version	Reason for Change	Date
1.0 Draft	Initial Draft Document	March 1, 2018