Enabling QoS on a SonicWALL Firewall for VoxEdge

The below configuration example is based on an ISP bandwidth of 10 Mbps downstream / 10 Mbps upstream accounting for 10 concurrent calls. 1 G.711 codec call requires around 90 Kbps downstream / upstream. Please adjust your numbers as per your local setup.

Assessing The Firewall's Interface

1. Enter the firewall's IP address in the address bar of your web browser.
2. Enter your firewall's username and password

VoIP Settings

1. Go to VoIP > Settings.
2. Check Enable Consistent NAT, uncheck/disable everything else.
3. Click Accept to save the settings.

Firewall Settings

1. Go to Firewall Settings > BWM.
2. Under Bandwidth Management Type, select Global.
3. Under Priority, disable EVERY category, except Medium.
Set values to:
Guaranteed: 50%
Burst: 90%
Enable Realtime and set values to:
Guaranteed: 50%
Burst: 100%
4. Click Accept to save the settings.

4/29/2019

Network

1. Go to Network > Interfaces > X1 (WAN)

2. Click the Configure icon on far right.

3. Go to Advance > Link Speed, and then set to Auto Negotiate

> Bandwidth Management (at bottom)...

• Check Enable Egress; set interface egress bandwidth to 10000.000000 (type in the upload speed in Kbps from your ISP)

• Check Enable Ingress; set interface ingress bandwidth to 10000.000000 (type in the download speed in Kbps from your ISP).

4. Click OK to save the settings.

Firewall

1. Go to Firewall > Service Objects > Services
NOTE: There may be a need to scroll down, as there are two categories, Service Group and Services.

2. Click Add Name: N2P_UDP_service_ports
Protocol : UDP(17)
Port Range : 1000 – 65500
Sub type : none

3. Click OK to save the settings

4. Go to Address Objects

5. Click Add: Name : N2P_SIP_network

Zone Assignment : WAN
Type : Network
Network:206.20.196.0
Netmask: 255.255.254.0
Name : N2P_RTP_network
Zone Assignment : WAN

4/29/2019

Type : Network
Network: 66.33.176.64
Netmask: 255.255.255.192

6. Click Add to save and then click Close

7. Go to Address Groups

8. Click Add Group
Name : N2P_networks group

9. Select N2P_SIP_network and N2P_RTP_network to add address object to group.

10. Click OK to save.

Access Rules

1. Go to Firewall > Access Rules

2. Click Add to add the rule for LAN > WAN

> in the General tab

Action : Allow
Service: Create New Service Group
Name : N2P_service_ports
Add the following port range to this group:
N2P_UDP_service_ports
Source : Any
Destination : N2P_networks group
Users Allowed :
ALL Schedule : Always on

> in the QoS tab

DSCP Marking Action : Explicit
Explicit DSCP Value : 46 - Expedited Forwarding (EF)

 > in the Ethernet BWM tab

Enable both Inbound and Outbound Bandwidth Management; set both to 0 Realtime

4/29/2019

3. Click Add to save and then click on Close

4. Click Add to add rule for WAN > LAN

> in 'General' Tab

Action : Allow
Service : N2P_service_ports
Source : N2P_networks group
Destination : Any
Users Allowed : ALL
Schedule : Always on

> in 'QoS' tab

DSCP Marking Action : Explicit
Explicit DSCP Value : 46 - Expedited Forwarding (EF)

 > in the Ethernet BWM tab

Enable both Inbound and Outbound Bandwidth Management; set both to 0 Realtime

5. Click Add to save and then click Close

4/29/2019