


Configuring RTCP to Support Held Calls Using RR and RS Bandwidth Modifiers

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Overview

This best practice provides guidance on configuring RTCP RR/RS Bandwidth modifiers from EMA to support held calls for a Multimedia Telephony Service for IMS (MTSI) environment as described on the page [AMR and RTCP Enhancements](#).

 This configuration is performed either on the PSX or SBC ERE.

SBC ERE Configuration

Configuring Packet Service Profile in ERE

Execute the following command to configure PSP:

```
set profiles media packetServiceProfile DEFAULT rtcpOptions rtcp enable
```

Enabling RTCP for HELD Calls

Execute the following command to configure the HELD calls:

```
set profiles media packetServiceProfile DEFAULT rtcpOptions rtcp enable enableRTCPForHeldCalls enable
```

Configuring RR and RS Bandwidth Values

Execute the following command to configure RR and RS bandwidth values:

```
set profiles media packetServiceProfile DEFAULT rtcpOptions rtcp enable enableRTCPForHeldCalls enable rrBandwidth 250 rsBandwidth 250
```

Configuring IP Signaling Profile

Execute the following command to send the RR and RS bandwidth information in the SDP offer:

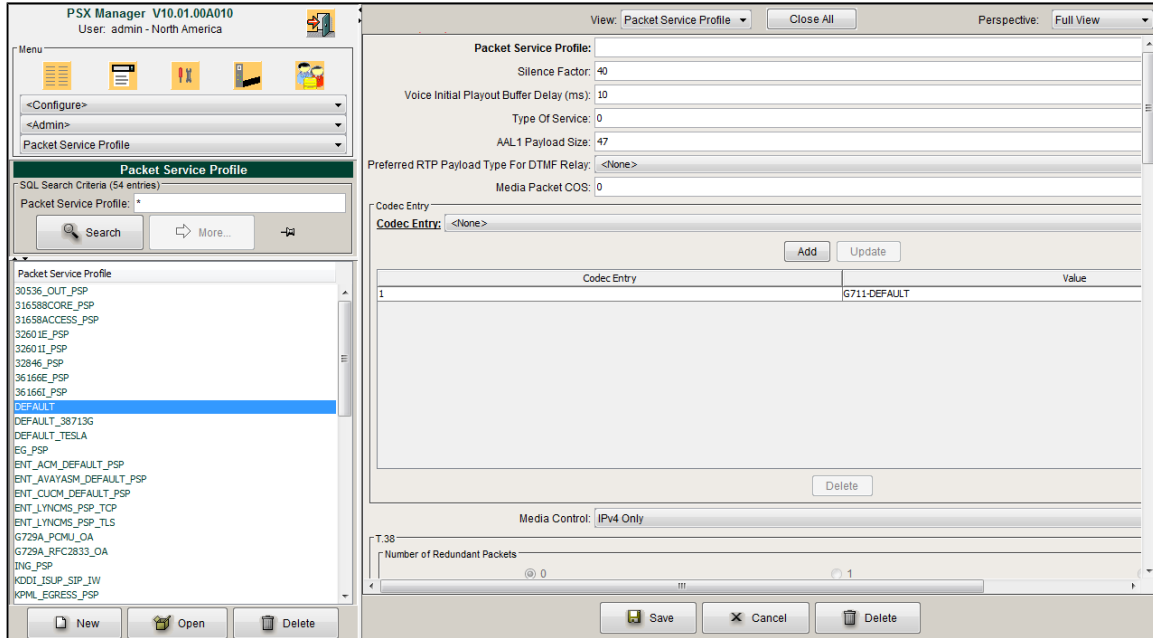
```
set profiles signaling ipSignalingProfile DEFAULT_SIP commonIpAttributes flags sendRTCPBandwidthInfo enable
```

PSX Configuration

Configure Packet Service Profile on PSX

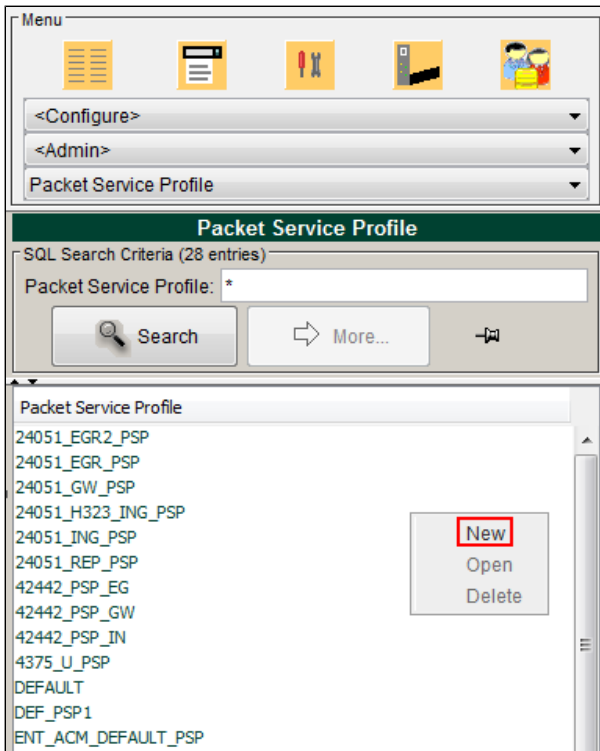
1. In the PSX Manager window, choose **Packet Service Profile** from the drop-down menu.

Figure 1: PSX - Packet Service Profile



2. To create Packet Service Profile, right click on the Selection Area.

Figure 2: Selection Area



Select **New** from the resultant pop-up menu.

3. The **Packet Service Profile** window appears. Provide the **Packet Service Profile** name.

Figure 3: Packet Service Profile

Packet Service Profile: PSP-DEFAULT

Silence Factor: 40

Voice Initial Playback Buffer Delay (ms): 10

Type Of Service: 0

AAL1 Payload Size: 47

Preferred RTP Payload Type For DTMF Relay: <None>

Media Packet COS: 0

Codec Entry: <None>

Add Update

Codec Entry	Value

Delete

Media Control: IPv4 Only

T.38

Number of Redundant Packets: 0 1 2

Low Speed Number of Redundant Packets: 0 1 2

T.38v0 Maximum Bit Rate: 2.4 kbits/s 4.8 kbits/s 9.6 kbits/s 14.4 kbits/s

Data Rate Management Type: Type 1 - Local Generation of TCF Type 2 - Transfer of TCF

Use Max Bit Rate Only: Disabled Enabled

ECM: ECM Preferred

T.38FaxMaxDatagram Size without Redundancy: Disabled Enabled

T.38FaxProtocolVersion: T.38(v0)

Honor Remote Precedence: Disabled Enabled

Save Cancel Delete

Scroll down the display window to locate RTCP option.

4. Choose the RTCP option to enable it. This action enables the RTCP configurable flags.

Figure 4: PSX RTCP - Fields

RTCP

RTCP

Packet Loss Threshold (Packets Lost/100,000 Packets): 0

RR Bandwidth: 400

RS Bandwidth: 300

Packet Loss Action: None Trap Trap And Disconnect Trap And Adapt

Enable RTCP Only For HELD Calls Termination For Pass-Through Calls

The following parameters are displayed:

 All available parameters require RTCP to be enabled.

Table 1: PSX RTCP - Fields parameters

Parameter	Length/Range	Default	Description
RTCP	NA	Disabled	When selected, this option enables Real-time Transport Control Protocol (RTCP) for the channel. RTCP is used to report traffic congestion data.

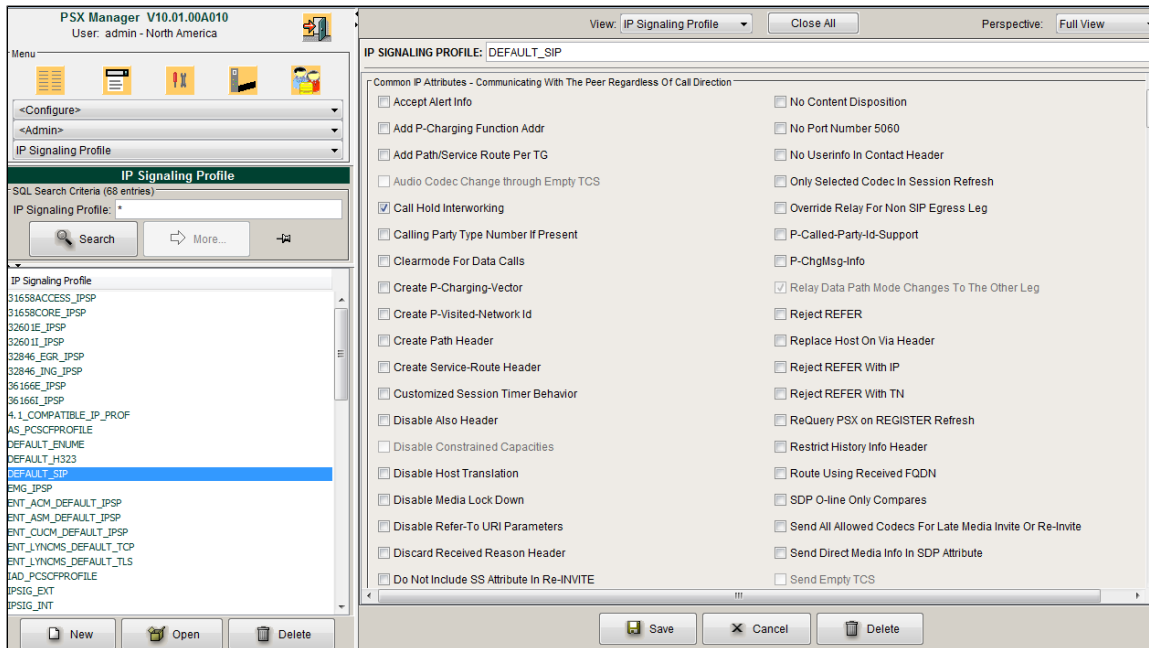
Packet Loss Threshold (Packets Lost/100,000 Packets)	NA	0	The packet loss threshold, measured in number of packets lost per 100,000 packets.
RR Bandwidth	100-4000	250	The RTCP bandwidth allocated to active data senders.
RS Bandwidth	100-3000	250	The RTCP bandwidth allocated for receivers.
Packet Loss Action	NA	None	The action to take when the packet loss threshold is exceeded on the channel. Possible actions are: <ul style="list-style-type: none"> • None—No action. • Trap—Generate an SNMP trap. • Trap and Disconnect—Generate an SNMP trap and disconnect the call. • Trap and Adapt—(applies to GSX only) Generate an SNMP trap and invoke an adaptation mechanism.
Enable RTCP Only For HELD Calls	NA	Disabled	If this parameter is enabled, SBC ignores the configured RR/RS values in the Packet Service Profile and send RR/RS = 0 in the offer/answer and disables RTCP when the call is active. When the call is HELD, and a RE-INVITE is sent, the CPN (SBC) uses the configured values in the Packet Service Profile for RTCP bandwidth and enables RTCP. When the call is RESUMED, the CPN (SBC) again disables RTCP by sending RR/RS=0 in the RE-INVITE. If disabled the older behavior of SBC is applicable.
Termination For Pass-Through Calls	NA	NA	When enabled, RTCP is terminated and generated locally even for pass-through calls.

5. Make the desired changes to these parameters.
6. Click **Save** to save the configuration.

Configure IP Signaling Profile on PSX

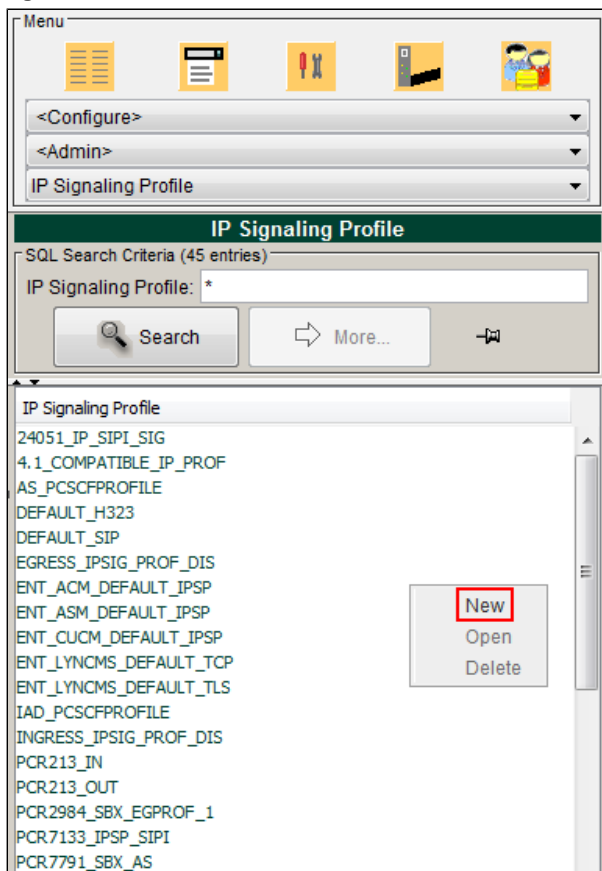
1. In the PSX Manager window, choose **IP Signaling Profile** from the drop-down menu.

Figure 5: PSX Codec - IP Signaling Profile



2. To create IP Signaling Profile, right click on the Selection Area.

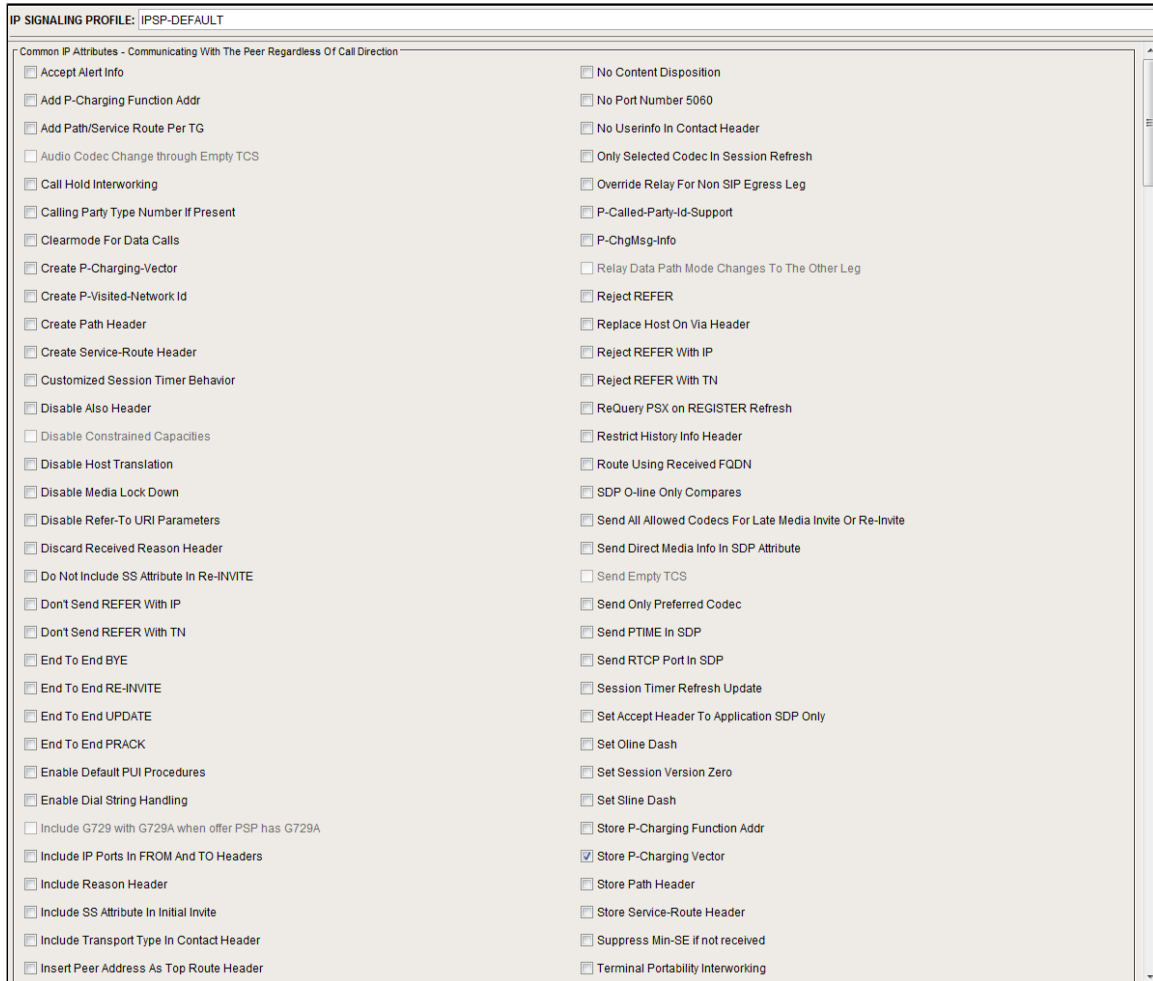
Figure 6: Selection Area



A pop-up menu appears. Select **New** from the pop-up menu.

3. The **IP Signaling Profile** window appears. Provide the **IP Signaling Profile** name.

Figure 7: IP Signaling Profile



Scroll down the display window to locate **Common IP Attributes - Communicating With The Peer Regardless Of Call Direction** section.

4. Enable the "Send RTCP Bandwidth Info" flag identified in the screen capture below:

Figure 8: PSX IP Signaling Profile - Fields

<input type="checkbox"/> Disable Also Header	<input type="checkbox"/> ReQuery PSX on REGISTER Refresh
<input type="checkbox"/> Disable Constrained Capacities	<input type="checkbox"/> Restrict History Info Header
<input type="checkbox"/> Disable Host Translation	<input type="checkbox"/> Route Using Received FQDN
<input type="checkbox"/> Disable Media Lock Down	<input type="checkbox"/> SDP O-line Only Compares
<input type="checkbox"/> Disable Refer-To URI Parameters	<input type="checkbox"/> Send All Allowed Codecs For Late Media Invite Or Re-Invite
<input type="checkbox"/> Discard Received Reason Header	<input type="checkbox"/> Send Direct Media Info In SDP Attribute
<input type="checkbox"/> Do Not Include SS Attribute In Re-INVITE	<input type="checkbox"/> Send Empty TCS
<input type="checkbox"/> Don't Send REFER With IP	<input type="checkbox"/> Send Only Preferred Codec
<input type="checkbox"/> Don't Send REFER With TN	<input type="checkbox"/> Send PTIME In SDP
<input type="checkbox"/> End To End BYE	<input type="checkbox"/> Send RTCP Port In SDP
<input type="checkbox"/> End To End RE-INVITE	<input type="checkbox"/> Session Timer Refresh Update
<input type="checkbox"/> End To End UPDATE	<input type="checkbox"/> Set Accept Header To Application SDP Only
<input type="checkbox"/> End To End PRACK	<input type="checkbox"/> Set Oline Dash
<input type="checkbox"/> Enable Default PUI Procedures	<input type="checkbox"/> Set Session Version Zero
<input type="checkbox"/> Enable Dial String Handling	<input type="checkbox"/> Set Sline Dash
<input type="checkbox"/> Include G729 with G729A when offer PSP has G729A	<input type="checkbox"/> Store P-Charging Function Addr
<input type="checkbox"/> Include IP Ports In FROM And TO Headers	<input type="checkbox"/> Store P-Charging Vector
<input type="checkbox"/> Include Reason Header	<input type="checkbox"/> Store Path Header
<input type="checkbox"/> Include SS Attribute In Initial Invite	<input type="checkbox"/> Store Service-Route Header
<input type="checkbox"/> Include Transport Type In Contact Header	<input type="checkbox"/> Suppress Min-SE if not received
<input type="checkbox"/> Insert Peer Address As Top Route Header	<input type="checkbox"/> Terminal Portability Interworking
<input type="checkbox"/> Lockdown Preferred Codec	<input checked="" type="checkbox"/> Send RTCP BandWidth Info
<input type="checkbox"/> Map Cause Location	<input type="checkbox"/> Validate Access Nw Info Header
<input type="checkbox"/> Map SGD In P-Sig-Info Header	<input type="checkbox"/> Use Pxx Route for Registered Invite
<input type="checkbox"/> Map Suspend/Resume Event In P-Svc-Info Header	<input type="checkbox"/> From Header Anonymisation

The following flag is now enabled:

Table 2: PSX IP Signaling Profile - Fields parameter

Parameter	Length/Range	Default	Description
Send RTCP Bandwidth Info	NA	NA	When this flag is enabled, the RR and RS bandwidth information, b=RR: and b=RS:, is sent in the SDP offer.

5. Click **Save** to save your changes.

