

Blocking Outbound Caller ID in AOS Voice Devices

Overview:

Beginning in AOS 14, AOS voice devices support SIP Privacy (defined in RFC 3323) and P-Asserted-Identity (defined in RFC 3325). The two features are independent of each other, but can be used together to block outgoing caller ID from the called party, while still providing it to the service provider for 911 and authentication purposes. It is only possible to block outbound caller ID in this way when the call originates from a PRI where the SETUP message has the Presentation set to RESTRICTED. The changes described below have no effect if the Presentation is not set to RESTRICTED.

Configuration Steps:

1. Enable P-Asserted-Identity on the SIP trunk
2. Enable Proxy-Require privacy (optional)

Enable P-Asserted-Identity on the SIP trunk:

1. Enter global configuration mode by typing
configure terminal
2. Enter the configuration for the SIP trunk (voice trunk T01 for this example)
voice trunk T01
3. Enable P-Asserted-Identity by issuing the following command
trust-domain
4. Exit back to global configuration mode
exit

Enable Proxy-Require privacy (optional):

1. Proxy-Require privacy is part of SIP Privacy (RFC 3323). The purpose of using this is to cause the call to fail if any SIP intermediaries do not support the extensions listed in the Privacy header. To enable it, issue the following command
ip sip grammar proxy-require privacy

Debug showing a call with Presentation set to RESTRICTED without entering the commands above:

```
15:35:23 ISDN.L2_FMT PRI 1 =====
15:35:23 ISDN.L2_FMT PRI 1 Recd = Sapi:00 C/R:R Tei:00
15:35:23 ISDN.L2_FMT PRI 1          Ctl:INFO Ns:6 Nr:6
15:35:23 ISDN.L2_FMT PRI 1          Prot:08 CRL:2 CRV:0003
15:35:23 ISDN.L2_FMT PRI 1          M - 05 SETUP
15:35:23 ISDN.L2_FMT PRI 1          IE - 04 BEARER CAPABILITY Len=3
15:35:23 ISDN.L2_FMT PRI 1          90 Xfer Cap.:3.1 kHz AUDIO
15:35:23 ISDN.L2_FMT PRI 1          90 Xfer Rate:64k
15:35:23 ISDN.L2_FMT PRI 1          A2 Layer 1:u-Law
15:35:23 ISDN.L2_FMT PRI 1          IE - 18 CHANNEL ID Len=3
15:35:23 ISDN.L2_FMT PRI 1          A1 Primary Rate
15:35:23 ISDN.L2_FMT PRI 1          Intfc ID:IMPLICIT
15:35:23 ISDN.L2_FMT PRI 1          Pref/Excl:PREFERRED
15:35:23 ISDN.L2_FMT PRI 1          D-Chan Indicated:NO
15:35:23 ISDN.L2_FMT PRI 1          Chan. Sel:FOLLOWS
15:35:23 ISDN.L2_FMT PRI 1          83 Numb/Map:NUMBER
```

```

15:35:23 ISDN.L2_FMT PRI 1 97 Channel:23
15:35:23 ISDN.L2_FMT PRI 1 IE - 6C CALLING PARTY # Len=12
15:35:23 ISDN.L2_FMT PRI 1 21 Numb. Type:NATIONAL
15:35:23 ISDN.L2_FMT PRI 1 Numb. Plan:ISDN/Telephony
15:35:23 ISDN.L2_FMT PRI 1 A0 Presentation:RESTRICTED
15:35:23 ISDN.L2_FMT PRI 1 Ph.# 2565559999
15:35:23 ISDN.L2_FMT PRI 1 IE - 70 CALLED PARTY # Len=5
15:35:23 ISDN.L2_FMT PRI 1 A1 Numb. Type:NATIONAL
15:35:23 ISDN.L2_FMT PRI 1 Numb. Plan:ISDN/Telephony
15:35:23 ISDN.L2_FMT PRI 1 Ph.# 9030
15:35:23 ISDN.L2_FMT PRI 1 =====
15:35:23 ISDN.L2_FMT PRI 1 Sent = Sapi:00 C/R:C Tei:00
15:35:23 ISDN.L2_FMT PRI 1 Ctl:INFO Ns:6 Nr:7
15:35:23 ISDN.L2_FMT PRI 1 Prot:08 CRL:2 CRV:8003
15:35:23 ISDN.L2_FMT PRI 1 M - 02 CALL_PROC
15:35:23 ISDN.L2_FMT PRI 1 IE - 18 CHANNEL ID Len=3
15:35:23 ISDN.L2_FMT PRI 1 A9 Primary Rate
15:35:23 ISDN.L2_FMT PRI 1 Intfc ID:IMPLICIT
15:35:23 ISDN.L2_FMT PRI 1 Pref/Excl:EXCLUSIVE
15:35:23 ISDN.L2_FMT PRI 1 D-Chan Indicated:NO
15:35:23 ISDN.L2_FMT PRI 1 Chan. Sel:FOLLOWS
15:35:23 ISDN.L2_FMT PRI 1 83 Numb/Map:NUMBER
15:35:23 ISDN.L2_FMT PRI 1 97 Channel:23
15:35:26 SIP.STACK MSG Tx: UDP src=10.19.209.19:5060 dst=10.1.4.5:5060
15:35:26 SIP.STACK MSG INVITE sip:9030@10.1.4.5:5060 SIP/2.0
15:35:26 SIP.STACK MSG From:
Private<sip:anonymous@10.1.4.5:5060;transport=UDP>;tag=2fa16d0-a13d113-13c4-4ee1-7544a02-4ee1
15:35:26 SIP.STACK MSG To: <sip:9030@10.1.4.5:5060;transport=UDP>
15:35:26 SIP.STACK MSG Call-ID: 2fe2a60-a13d113-13c4-4ee1-4d245575-4ee1@10.1.4.5
15:35:26 SIP.STACK MSG CSeq: 1 INVITE
15:35:26 SIP.STACK MSG Via: SIP/2.0/UDP 10.19.209.19:5060;branch=z9hG4bK-4ee1-1342063-4ec28563
15:35:26 SIP.STACK MSG Max-Forwards: 70
15:35:26 SIP.STACK MSG Supported: 100rel,replaces
15:35:26 SIP.STACK MSG Allow: ACK, BYE, CANCEL, INFO, INVITE, NOTIFY, OPTIONS, PRACK, REFER, REGISTER
15:35:26 SIP.STACK MSG User-Agent: ADTRAN_Total_Access_916e/16.04.00.SB.E
15:35:26 SIP.STACK MSG Contact: <sip:anonymous@10.19.209.19:5060;transport=UDP>
15:35:26 SIP.STACK MSG Content-Type: application/SDP
15:35:26 SIP.STACK MSG Content-Length: 264
15:35:26 SIP.STACK MSG v=0
15:35:26 SIP.STACK MSG o=- 1204752926 1204752926 IN IP4 10.19.209.19
15:35:26 SIP.STACK MSG s=-
15:35:26 SIP.STACK MSG c=IN IP4 10.19.209.19
15:35:26 SIP.STACK MSG t=0 0
15:35:26 SIP.STACK MSG m=audio 10000 RTP/AVP 0 18 101
15:35:26 SIP.STACK MSG a=rtpmap:0 PCMU/8000
15:35:26 SIP.STACK MSG a=rtpmap:18 G729/8000
15:35:26 SIP.STACK MSG a=fmtp:18 annexb=no
15:35:26 SIP.STACK MSG a=silenceSupp:off - - -
15:35:26 SIP.STACK MSG a=rtpmap:101 telephone-event/8000
15:35:26 SIP.STACK MSG a=fmtp:101 0-15

```

The From and Contact headers (highlighted in blue) are modified as shown when the Presentation is set to RESTRICTED (highlighted in green).

Debug showing the effect of the commands entered above on a call with Presentation set to RESTRICTED:

```

14:52:07 ISDN.L2_FMT PRI 1 =====
14:52:07 ISDN.L2_FMT PRI 1 Recd = Sapi:00 C/R:R Tei:00
14:52:07 ISDN.L2_FMT PRI 1 Ctl:INFO Ns:3 Nr:3
14:52:07 ISDN.L2_FMT PRI 1 Prot:08 CRL:2 CRV:0002
14:52:07 ISDN.L2_FMT PRI 1 M - 05 SETUP
14:52:07 ISDN.L2_FMT PRI 1 IE - 04 BEARER CAPABILITY Len=3

```

```

14:52:07 ISDN.L2_FMT PRI 1 90 Xfer Cap.:3.1 kHz AUDIO
14:52:07 ISDN.L2_FMT PRI 1 90 Xfer Rate:64k
14:52:07 ISDN.L2_FMT PRI 1 A2 Layer 1:u-Law
14:52:07 ISDN.L2_FMT PRI 1 IE - 18 CHANNEL ID Len=3
14:52:07 ISDN.L2_FMT PRI 1 A1 Primary Rate
14:52:07 ISDN.L2_FMT PRI 1 Intfc ID:IMPLICIT
14:52:07 ISDN.L2_FMT PRI 1 Pref/Excl:PREFERRED
14:52:07 ISDN.L2_FMT PRI 1 D-Chan Indicated:NO
14:52:07 ISDN.L2_FMT PRI 1 Chan. Sel:FOLLOWS
14:52:07 ISDN.L2_FMT PRI 1 83 Numb/Map:NUMBER
14:52:07 ISDN.L2_FMT PRI 1 97 Channel:23
14:52:07 ISDN.L2_FMT PRI 1 IE - 6C CALLING PARTY # Len=12
14:52:07 ISDN.L2_FMT PRI 1 21 Numb. Type:NATIONAL
14:52:07 ISDN.L2_FMT PRI 1 Numb. Plan:ISDN/Telephony
14:52:07 ISDN.L2_FMT PRI 1 A0 Presentation:RESTRICTED
14:52:07 ISDN.L2_FMT PRI 1 Ph.# 2565559999
14:52:07 ISDN.L2_FMT PRI 1 IE - 70 CALLED PARTY # Len=5
14:52:07 ISDN.L2_FMT PRI 1 A1 Numb. Type:NATIONAL
14:52:07 ISDN.L2_FMT PRI 1 Numb. Plan:ISDN/Telephony
14:52:07 ISDN.L2_FMT PRI 1 Ph.# 9030
14:52:07 ISDN.L2_FMT PRI 1 =====
14:52:07 ISDN.L2_FMT PRI 1 Sent = Sapi:00 C/R:C Tei:00
14:52:07 ISDN.L2_FMT PRI 1 Ctl:INFO Ns:3 Nr:4
14:52:07 ISDN.L2_FMT PRI 1 Prot:08 CRL:2 CRV:8002
14:52:07 ISDN.L2_FMT PRI 1 M - 02 CALL_PROC
14:52:07 ISDN.L2_FMT PRI 1 IE - 18 CHANNEL ID Len=3
14:52:07 ISDN.L2_FMT PRI 1 A9 Primary Rate
14:52:07 ISDN.L2_FMT PRI 1 Intfc ID:IMPLICIT
14:52:07 ISDN.L2_FMT PRI 1 Pref/Excl:EXCLUSIVE
14:52:07 ISDN.L2_FMT PRI 1 D-Chan Indicated:NO
14:52:07 ISDN.L2_FMT PRI 1 Chan. Sel:FOLLOWS
14:52:07 ISDN.L2_FMT PRI 1 83 Numb/Map:NUMBER
14:52:07 ISDN.L2_FMT PRI 1 97 Channel:23
14:52:09 SIP.STACK MSG Tx: UDP src=10.19.209.19:5060 dst=10.1.4.5:5060
14:52:09 SIP.STACK MSG INVITE sip:9030@10.1.4.5:5060 SIP/2.0
14:52:09 SIP.STACK MSG From:
Private<sip:anonymous@10.1.4.5:5060;transport=UDP>;tag=2fa0de8-a13d113-13c4-44bc-4d9f467d-44bc
14:52:09 SIP.STACK MSG To: <sip:9030@10.1.4.5:5060;transport=UDP>
14:52:09 SIP.STACK MSG Call-ID: 2fe2870-a13d113-13c4-44bc-32daef15-44bc@10.1.4.5
14:52:09 SIP.STACK MSG CSeq: 1 INVITE
14:52:09 SIP.STACK MSG Via: SIP/2.0/UDP 10.19.209.19:5060;branch=z9hG4bK-44bc-10c7fdb-76dc588b
14:52:09 SIP.STACK MSG Max-Forwards: 70
14:52:09 SIP.STACK MSG Proxy-Require: privacy
14:52:09 SIP.STACK MSG Privacy: id
14:52:09 SIP.STACK MSG P-Asserted-Identity: <sip:2565559999@10.1.4.5>
14:52:09 SIP.STACK MSG Supported: 100rel,replaces
14:52:09 SIP.STACK MSG Allow: ACK, BYE, CANCEL, INFO, INVITE, NOTIFY, OPTIONS,
PRACK, REFER, REGISTER
14:52:09 SIP.STACK MSG User-Agent: ADTRAN_Total_Access_916e/16.04.00.SB.E
14:52:09 SIP.STACK MSG Contact: <sip:anonymous@10.19.209.19:5060;transport=UDP>
14:52:09 SIP.STACK MSG Content-Type: application/SDP
14:52:09 SIP.STACK MSG Content-Length: 264
14:52:09 SIP.STACK MSG
14:52:09 SIP.STACK MSG v=0
14:52:09 SIP.STACK MSG o=- 1204750329 1204750329 IN IP4 10.19.209.19
14:52:09 SIP.STACK MSG s=-
14:52:09 SIP.STACK MSG c=IN IP4 10.19.209.19
14:52:09 SIP.STACK MSG t=0 0
14:52:09 SIP.STACK MSG m=audio 10000 RTP/AVP 0 18 101
14:52:09 SIP.STACK MSG a=rtpmap:0 PCMU/8000
14:52:09 SIP.STACK MSG a=rtpmap:18 G729/8000
14:52:09 SIP.STACK MSG a=fmtp:18 annexb=no
14:52:09 SIP.STACK MSG a=silenceSupp:off - - -
14:52:09 SIP.STACK MSG a=rtpmap:101 telephone-event/8000
14:52:09 SIP.STACK MSG a=fmtp:101 0-15

```

SIP Privacy and P-Asserted-Identity are triggered by the line setting Presentation to RESTRICTED in the SETUP message (highlighted in green). The From and Contact headers (highlighted in blue) are modified as shown when the Presentation is set to RESTRICTED (highlighted in green). Lines added by enabling P-Asserted-Identity are highlighted in yellow. The line added by enabling Proxy-Require privacy is highlighted in orange.