Resolve SRTP Decrypt Failures and No Audio in Webex Contact Center with AudioCodes SBC

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Issue

Inbound PSTN calls to a Webex Contact Center tenant connected successfully but had no audio between callers and agents. The call flow involved Provider A1 Austria through an AudioCodes SBC and firewall to Webex Contact Center, with the agent leg routed back through the same SBC to Microsoft Teams. Audio was missing on both the inbound PSTN leg and the agent leg, preventing agents from communicating with callers and impacting contact center call handling.

Media statistics showed SRTP packets being sent toward Webex but not successfully received by the cloud. Analysis revealed these error conditions:

- Sent Packets: 1557 (from SBC side)
- Received Packets: 0
- Decrypt Failures: 1569
- Untrusted RTP Protocol: srtp

SIP/SDP samples showed differing crypto declarations on each side, with the SBC SDP offering multiple a=crypto lines while Webex 200 OK SDP advertised a single a=crypto: AES_CM_128_HMAC_SHA1_80 inline parameter.

Environment

- Webex Contact Center tenant
- AudioCodes SBC (Mediant VE SBC/v.7.40A.501.392)
- Provider A1 Austria PSTN connection
- Microsoft Teams for agent infrastructure
- Firewall between SBC and Webex Contact Center
- Call flow: PSTN → Provider A1 Austria → AudioCodes SBC → Firewall → Webex Contact Center
- Agent leg: Webex Contact Center → Firewall → SBC → Microsoft Teams

Resolution

The issue was resolved by applying specific AudioCodes SBC media security configuration settings to address the SRTP crypto mismatch between SIP signaling and the media sent by the SBC.

Configuration Steps

Apply these AudioCodes SBC media security parameters:

Step 1: Configure SBC Enforce MKI Size

Navigate to **Media Security** section and set **SBC Enforce MKI Size** to **Enforce**

Step 2: Configure SBC Remove Crypto Lifetime in SDP

Set **SBC Remove Crypto Lifetime in SDP** to **Yes**

Validation

After applying these settings, audio was successfully restored on both inbound and outbound call legs. Test calls confirmed proper media flow between callers and agents through the Webex Contact Center platform.

Troubleshooting Analysis

The problem was isolated to the A1 Austria PSTN/SBC path through comparative testing. An alternate Cloud PSTN connection in the same organization did not exhibit the audio problem, confirming the issue was specific to the AudioCodes SBC configuration with the A1 Austria provider.

Packet captures and media statistics showed clear evidence of SRTP decrypt failures, with these SIP/SDP negotiation mismatch:

SBC INVITE SDP (offering multiple crypto options):

```
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:WZMYswMS
a=crypto:2 AES_CM_128_HMAC_SHA1_32 inline:27NXBojL
a=crypto:3 AES_256_CM_HMAC_SHA1_80 inline:lWmcbjYR
a=crypto:4 AES_256_CM_HMAC_SHA1_32 inline:TXG/YY/d
```

Webex 200 OK SDP (single crypto selection):

```
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:B3UfL3Ta
```

Cause

The root cause was an SRTP crypto mismatch between the SIP signaling negotiation and the actual media encryption keys used by the AudioCodes SBC. The SBC was sending SRTP packets with incorrect crypto keys that did not match what was negotiated and agreed upon in the SIP signaling exchange. This resulted in decrypt failures on the Webex Contact Center side, preventing successful audio communication despite successful call establishment.

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