Resolve Webex Calling Wholesale Call Quality Issues and Call Drops with Jitter and PSTN-Related Audio Problems

Contents

Issue

Intermittent call quality degradation, one-way audio, and dropped calls were affecting all phones in a Webex Calling Wholesale deployment. The reported symptoms included:

- Calls disconnecting after being answered.
- One-way audio during active calls.
- Poor audio quality across multiple extensions.
- Call drops occurring at various times during conversations.

Specific call examples documented these issues:

- Call from external number to extension x202: 7 minutes 52 seconds duration with call drop and one-way audio.
- Call from external number to extension x203: 2 minutes duration with call drop and one-way audio.
- Internal call from extension x208 to extension x205: 9 minutes 7 seconds duration with call quality issues.
- Call from external number to extension x201: 6 seconds duration where call was answered then immediately dropped.

Environment

- Technology: Cloud and Hybrid Products
- Subtechnology: Webex Calling Wholesale
- Product Family: WWHOLEA
- Product: A-WHOLESALE

- Site: 894121
- Affected extensions: x201, x202, x203, x205, x208
- Internet connection: 1000/100 Mbps plan with validated speed performance
- Network utilization: Confirmed as not high during issue occurrence
- Initial troubleshooting completed: Phone restarts, internet service restarts, utilization checks, and bandwidth validation

Resolution

The resolution involved analyzing platform logs for the reported call samples to identify the root causes of the different symptom patterns:

Step 1: Call Log Analysis

TAC reviewed the customer-provided call examples from July 22, 2026 and successfully identified three of the four reported calls in platform logs using correlation IDs.

Step 2: SIP Signaling Analysis

Analysis of SIP signaling revealed different call termination sources:

Call 1 Analysis:

- Source: External number to extension x202
- Duration: 7 minutes 52 seconds
- Correlation ID: f7fbf131-2aac-4b40-b58e-3169826b8bbf
- Finding: BYE message originated from the user's device (local termination).
- Media flow: Packets successfully sent and received in both directions.
- Issue identified: High MaxJitter values during the call.

Call 2 Analysis:

- Source: External number to extension x203

- Duration: 2 minutes
- Correlation ID: 261b4dc1-05aa-4706-99d7-40491da96ebf
- Finding: BYE message originated from the phone (local termination)
- Media flow: Consistent packet flow observed
- Issue identified: High MaxJitter values during the call

Call 4 Analysis:

- Source: External number to extension x201
- Duration: 6 seconds
- Correlation ID: cdcc5147-fe3f-4d90-bb39-10b56b3bad7e
- Finding: BYE message originated from the PSTN side.
- Media flow: Phone sent packets but did not receive inbound packets.
- Issue confirmed: Lack of inbound audio (one-way audio).

Step 3: Issue Pattern Identification

The analysis revealed two distinct symptom patterns:

- Media quality degradation associated with elevated jitter values (extensions x202 and x203).
- PSTN-related call termination with missing inbound media packets (extension x201).
- One call involving extensions x205 and x208 could not be located in platform logs.

Step 4: Customer Confirmation

After providing the analysis results to the customer, they confirmed that the issues had been resolved and requested case closure.

Cause

The investigation identified multiple distinct root causes rather than a single common failure:

For Calls Involving Extensions x202 and x203:

- Root cause: Elevated MaxJitter values during active calls.
- Impact: Media quality degradation leading to perceived call quality issues.
- Call termination: Originated locally from user devices, likely due to poor media quality.
- Media packet flow: Bidirectional transmission was successful, but jitter spikes affected call quality.

For the Call Involving Extension x201:

- Root cause: PSTN-side call termination with missing inbound media packets.
- Impact: One-way audio condition where the phone transmitted media but received no inbound audio.
- Call termination: Originated from the PSTN side.
- Media packet flow: Outbound transmission successful, but no inbound packets received.

The underlying causes indicated separate technical issues involving network jitter affecting media quality and PSTN interoperability problems affecting media packet delivery.

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