

Can you  
hear me?

## Case | Silent Calls

## Starting Point | Major client escalation

person on other end of call can't hear me	Dec 10	1x
person on other end of call can't hear me	Dec 11	2x
person on other end of call can't hear me	Dec 12	--
person on other end of call can't hear me	Dec 13	1x
person on other end of call can't hear me	Dec 16	4x
person on other end of call can't hear me	Dec 17	1x
person on other end of call can't hear me	Dec 18	3x
person on other end of call can't hear me	Dec 19	1x
person on other end of call can't hear me	Dec 20	1x

/excerpt of a 3 months log

# Triggered Activities

1

Task force  
established

2

Software  
checked

3

Hardware  
checked

4

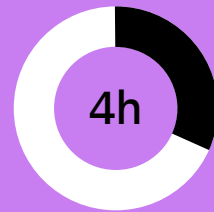
4 Months of  
work

>

!

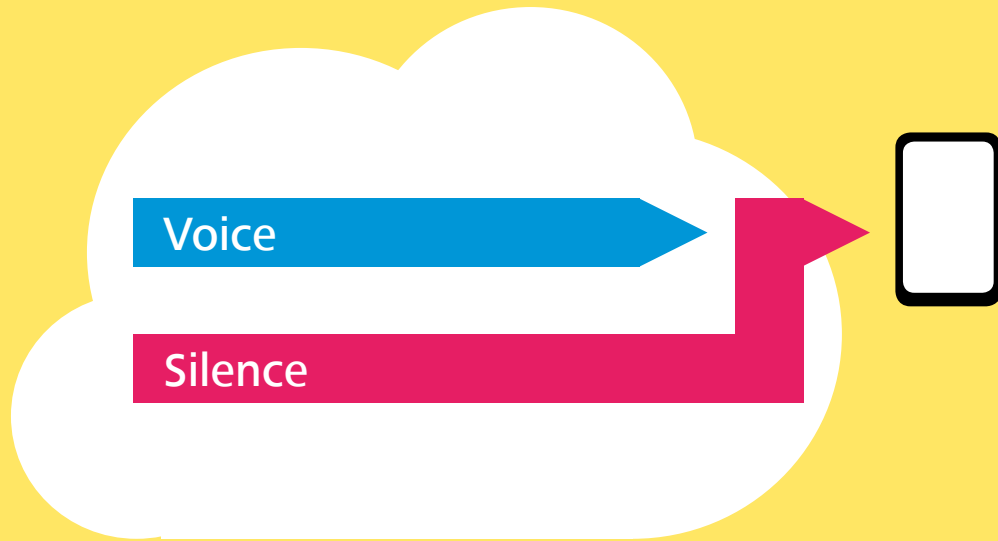
No results!

Next try | “Couldn’t we use the Voipfuture stuff?”



Time required to understand the problem

# Voipfuture monitoring revealed | Receiver chooses to play a zombie stream



## Cause:

- Two RTP streams arrive
- Streams from previous calls were closed improperly
- Open streams carrying silence remain in the network for weeks or months

Reason behind: Bug in call manager

# The GUI view | Hunting the zombie

Home Monitor Analyze Customer Care Manage Info

You are logged in as [voipfuture\\_admin](#) | [Logout](#)

**Search Result**

Search Interval 2013-12-18 12:49:00 - 2013-12-18 12:54:00  
Stream Time 2013-12-18 12:50:34 - 2013-12-18 12:50:34

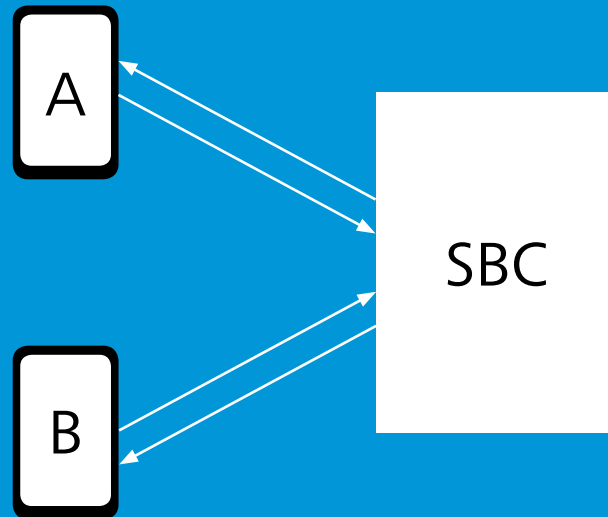
Date: 2013-12-18 hh:mm:ss 12 : 49 : 00 Apply

◀ Previous Streams Next Streams ▶

Compare	Quality	MOS-LQE	Source IP	Destination IP	Probe Interface	Stream SSRC	Start	Duration
<input type="radio"/>	<input type="radio"/>	4.4 / 4.4 / 4.4	82.246.124.246_rmsb1/2-n:56300	82.83.128.8_rmsgw001-rtp:19670	rmsb1	141566	2013-12-18 12:50:34.128	00:00:24.362
<input type="radio"/>	<input checked="" type="radio"/>	4.4 / 4.4 / 4.4	82.246.124.246_rmsb1/2-n:56300	82.83.128.8_rmsgw001-rtp:19670	rmsb1	125418	2013-12-18 12:50:34.128	00:00:24.361

Two different streams simultaneously arrive at one receiver

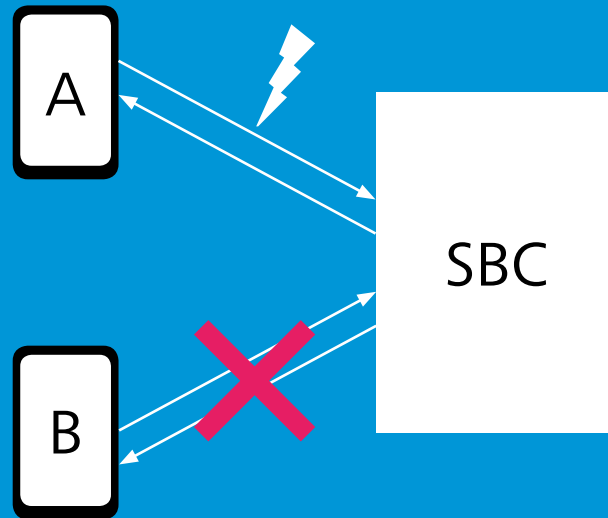
## Another example | Multi-national VoIP service for global clients



Call setup with two call legs

- Many tickets for silent calls and dropped calls.
- Linkage between problems not understood.

# Voipfuture monitoring insight | Burst loss of 20 RTP packets



## Impact:

- Packet loss triggers termination of one call leg.
- The other call leg remains active.



# Required monitoring capabilities



All RTP streams



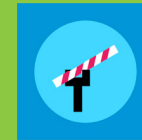
Full traffic



Both call directions



5-second time slices



Network segmentation

Thank you for your attention

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