Architecture

The connection is via HTTPS with a level 3 certificate via (https://xxxx.ucontactcloud.com), uContact uses HTTPS (http2) with a REST API and Secure Websockets (wss).

The connection is made through Secure Websockets https://xxxx.ucontactcloud.com:8089/ws (for SIP signaling).

Our STUN Server (stun.ucontactcloud.com)

Agent and Telephony server negotiate with STUN Server gathering ICE candidates.

After that the connection is made from the agent to the telephony server, bridging the communication with the telephony provider (via SIP, SIP TLS, SIP WebRTC).

The telephony server does the bridging to host all the recordings, transcoding, etc.

Codecs: We use alaw, ulaw, opus, vp8, h264. Al the transcoding part takes action in the telephony server.

QoS: We can do TOS and COS tag (on the server-side) the packets with multiple parameters in different actions (video, audio, text)

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The server prefers cipher suites supporting Perfect-Forward-Secrecy.

The server provides HTTP Strict Transport Security.

The server provides HTTP Public Key Pinning.

X-XSS-Protection

Hardware Sizing (On-Premise)

Size	Agents	Telephony	Backend	Database
Small	< 30	1	0	0
Medium	< 500	1	1	0
Big	> 500	1	1	1

Accepted Telecommunications Equipment

Digium or Sangoma Cards, Xorcom, Dinstar, KHOMP, SIP Gateways, SIP Hardphones.

The teams of agents and supervisors must have the following minimum requirements:

Agent Desktop

- Processor: Core i5 2.0 GHz
- Memory: 8GB RAM
- Resolution: 1366 x 768 (minimum)
- Disk: 160 GB
- Chrome browser
- 2mb symmetric internet connection

Supervisor Desktop

- Processor: Core i5 2.5 GHz
- Memory: 8 GB RAM
- Resolution: 1366 x 768 (minimum)
- Disk: 160 GB
- Chrome browser

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Component Versions

BBDD: Mysql: 8 or 5.7

WebServer: NGINX 1.17. 0 (latest)

OS: Ubuntu 20.04, 18.04, 16.04

Telephony: Asterisk Modificado branch 13

Frontend: HTML5 y JS

Backend: Java 8

Structure.

```
1/etc/IntegraServer/web/
2                    IntegraPortalWS.war
3□□□□□□IntegraChannels.war
4□□□□□□IntegraGamification.war
5                    /forms/
6                    /images/
7                    /uContact/
8                    /workflowdesigner/
9                    /formsdesigner/
10                     /tmp/
11□□□□□□/webchatclient/
12 /etc/IntegraServer/reports/
13/etc/IntegraServer/server/
14□□□□□□□IntegraServer.jar
15□□□□□□□/jasper/*.jar
16□□□□□□□/jdbc/*.jar
17□□□□□□□/mail/*jar
18□□□□□□□/others/*.jar
19□□□□□□□/ssh/*.jar
20□□□□□□□/ws/*.jar
```

Network requirements for video calls.

Bandwidth

- 1MB/s simétrico

Latency for toll-quality

- <100 ms total

Jitter

- < 20 ms jitter

Packet loss

- < 1 % for voice calls

Codec

- VP8

Network requirements for VoIP.

Bandwidth

- 256 kbps per call

Latency for toll-quality

- <100 ms total

Jitter

- < 20 ms jitter

Packet loss

- < 1 % for voice calls

Codec

- ulaw, alaw

Required recordings Storage (audio y video)

Duration	Required Storage for audio (.gsm)	Required Storage for video (.webm)

Duration	Required Storage for audio (.gsm)	Required Storage for video (.webm)
1 Minute	100 kb	1.5 MB
10 Minutes	1 MB	20 MB
20 Minutes	2.8 MB	44 MB
30 Minutes	3.8 MB	100 MB

Revision #2
Created 24 January 2023 17:40:08 by Alejandra Vega
Updated 28 July 2026 17:39:08 by Alejandra Vega