

# Configure Jabber to Use Custom Audio and Video Port Range on CUCM 11.5.1

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## Introduction

This document describes the procedure to configure Cisco Jabber to use custom audio and video port range on Cisco Unified Communications Manager (CUCM) 11.5.1.

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## Prerequisites

### Requirements

Cisco recommends that you have knowledge of:

- Cisco Jabber
- Cisco Unified Communication Manager (CUCM)

### Components Used

The information in this document is based on these software versions:

- Cisco Jabber for Windows 11.9.x
- Cisco Unified Communications Manager 11.5.x

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure you understand the potential impact of any command.

## Configure

You can create a new SIP Profile or simply copy the Standard SIP Profile and modify the port range on your copied profile as follows:

- Navigate to **Device > Device Settings > SIP Profile** on the Cisco Unified CM Administration page
- Click on **Find** button to display all SIP profiles
- Click on the Standard SIP Profile and click on the **Copy** button
- Scroll down to the Media Port Ranges field and click on the radio button titled **Separate Port Ranges for Audio and Video**
- Specify the Start Audio Port, the Stop Audio Port, the Start Video Port and the Stop Video Port

Parameters used in Phone	
Timer Invite Expires (seconds) *	180
Timer Register Delta (seconds) *	5
Timer Register Expires (seconds) *	3600
Timer T1 (msec) *	500
Timer T2 (msec) *	4000
Retry INVITE *	6
Retry Non-INVITE *	10
Media Port Ranges	<input type="radio"/> Common Port Range for Audio and Video <input checked="" type="radio"/> Separate Port Ranges for Audio and Video
Start Audio Port *	16384
Stop Audio Port *	16393
Start Video Port *	16394
Stop Video Port *	16403

**Note:** The Start port needs to be an even number and the Stop port needs to be odd number

## Verify

Place a call from Jabber and confirm in the Jabber log that the ports specified in the outbound INVITE Session Description Protocol (SDP) message falls within the configured port range.

```

CSeq: 101 INVITE
User-Agent: Cisco-CSF
Contact: <sip:1553c615-14d6-39e8-0399-af6fdd5ee447@10.66.87.207:50268;transport=tcp>;+u.sip!devicename.ccm.cisco.com="CSFwstest1";video;bfcp
Expires: 180
Accept: application/sdp
Allow: ACK,BYE,CANCEL,INVITE,NOTIFY,OPTIONS,REFER,REGISTER,UPDATE,SUBSCRIBE,INFO
Remote-Party-ID: "1000" <sip:1000@dmaccorm-ucmpub.myothertestdomain.net>;party=calling;id-type=subscriber;privacy=off;screen=yes
Supported: replaces,join,sdp-anat,norefersub,resource-priority,extended-refer,X-cisco-callinfo,X-cisco-serviceuri,X-cisco-escapecodes,X-cisco-service-control,X-cisco-srtp-fallback,X-cisco-monrec,X-cisco-config,X-cisco-sis-7.0.0,X-cisco-xsi-8.5.1
Allow-Events: kpml,dialog
Recv-Info: conference
Recv-Info: x-cisco-conference
Content-Length: 2246
Content-Type: application/sdp
Content-Disposition: session;handling=optional

```

v=0  
o=Cisco-SIPUA 20391 0 IN IP4 10.66.87.207  
s=SIP Call  
b=AS:4000  
t=0 0  
a=cisco-mari:vl  
a=cisco-mari-rate  
**m=audio 16390** RTP/AVP 114 9 104 105 0 8 18 111 101  
c=IN IP4 10.66.87.207  
a=rtpmap:114 opus/48000/2  
a=rtpmap:9 G722/8000  
a=rtpmap:104 G7221/16000  
a=fmtp:104 bitrate=32000  
a=rtpmap:105 G7221/16000  
a=fmtp:105 bitrate=24000  
a=rtpmap:0 PCMU/8000  
a=rtpmap:8 PCMA/8000  
a=rtpmap:18 G729/8000  
a=fmtp:18 annexb=no  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtpmap:101 telephone-event/8000  
a=fmtp:101 0-15  
a=sendrecv  
**m=video 16398** RTP/AVP 126 97 111  
c=IN IP4 10.66.87.207  
b=TIAS:4000000  
a=rtpmap:126 H264/90000  
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-fs=3601;max-rcmd-nalu-size=32000  
a=imageattr:126 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]  
a=content:main  
a=label:11  
a=rtpmap:97 H264/90000  
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601  
a=imageattr:97 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtcp-fb:\* ccm fir  
a=rtcp-fb:\* ccm tmmbr  
a=rtcp-fb:\* nack pli  
a=recvonly  
**m=video 16394** RTP/AVP 126 97 111  
c=IN IP4 10.66.87.207  
b=TIAS:4000000  
a=rtpmap:126 H264/90000  
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-fs=3601;max-rcmd-nalu-size=32000  
a=content:slides  
a=label:12  
a=rtpmap:97 H264/90000  
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtcp-fb:\* ccm fir  
a=rtcp-fb:\* ccm tmmbr  
a=rtcp-fb:\* nack pli  
a=sendrecv  
m=application 5904 UDP/BFCP \*  
c=IN IP4 10.66.87.207  
a=floorctrl:c-s

```
a=confid:3
a=floorid:2 mstrm:12
a=userid:3
a=setup:actpass
a=connection:new
a=sendrecv
m=application 39878 RTP/AVP 125
c=IN IP4 10.66.87.207
a=rtpmap:125 H224/4800
a=rtcp:39879
a=sendrecv
```

## Troubleshoot

If the port specified in the INVITE SDP is not within the configured range, review the jabber.log file after a restart of the client to determine that the custom port range has been applied.

```
CSeq: 101 INVITE
User-Agent: Cisco-CSF
Contact: <sip:1553c615-14d6-39e8-0399-af6fdd5ee447@10.66.87.207:50268;transport=tcp>;+u.sip!devicename.ccm.cisco.com="CSFwstest1";video;bfcp
Expires: 180
Accept: application/sdp
Allow: ACK,BYE,CANCEL,INVITE,NOTIFY,OPTIONS,REFER,REGISTER,UPDATE,SUBSCRIBE,INFO
Remote-Party-ID: "1000" <sip:1000@dmaccorm-ucmpub.myothertestdomain.net>;party=calling;id-type=subscriber;privacy=off;screen=yes
Supported: replaces,join,sdp-anat,norefersub,resource-priority,extended-refer,X-cisco-callinfo,X-cisco-serviceuri,X-cisco-escapecodes,X-cisco-service-control,X-cisco-srtp-fallback,X-cisco-monrec,X-cisco-config,X-cisco-sis-7.0.0,X-cisco-xsi-8.5.1
Allow-Events: kpml,dialog
Recv-Info: conference
Recv-Info: x-cisco-conference
Content-Length: 2246
Content-Type: application/sdp
Content-Disposition: session;handling=optional

v=0
o=Cisco-SIPUA 20391 0 IN IP4 10.66.87.207
s=SIP Call
b=AS:4000
t=0 0
a=cisco-mari:v1
a=cisco-mari-rate
m=audio 16390 RTP/AVP 114 9 104 105 0 8 18 111 101
c=IN IP4 10.66.87.207
a=rtpmap:114 opus/48000/2
a=rtpmap:9 G722/8000
a=rtpmap:104 G7221/16000
a=fmtp:104 bitrate=32000
a=rtpmap:105 G7221/16000
a=fmtp:105 bitrate=24000
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=fmtp:18 annexb=no
a=rtpmap:111 x-ulpfecuc/8000
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us
a=fmtp:111 max_esel=1420;m=8;max_n=32;FEC_ORDER=FEC_S RTP
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-15
```

```

a=sendrecv
m=video 16398 RTP/AVP 126 97 111
c=IN IP4 10.66.87.207
b=TIAS:4000000
a=rtpmap:126 H264/90000
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-
fs=3601;max-rcmd-nalu-size=32000
a=imageattr:126 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]
a=content:main
a=label:11
a=rtpmap:97 H264/90000
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601
a=imageattr:97 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]
a=rtpmap:111 x-ulpfecuc/8000
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us
a=fmtp:111 max_esel=1420;m=8;max_n=32;FEC_ORDER=FEC_SRTP
a=rtcp-fb:* ccm fir
a=rtcp-fb:* ccm tmmbr
a=rtcp-fb:* nack pli
a=recvonly
m=video 16394 RTP/AVP 126 97 111
c=IN IP4 10.66.87.207
b=TIAS:4000000
a=rtpmap:126 H264/90000
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-
fs=3601;max-rcmd-nalu-size=32000
a=content:slides
a=label:12
a=rtpmap:97 H264/90000
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601
a=rtpmap:111 x-ulpfecuc/8000
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us
a=fmtp:111 max_esel=1420;m=8;max_n=32;FEC_ORDER=FEC_SRTP
a=rtcp-fb:* ccm fir
a=rtcp-fb:* ccm tmmbr
a=rtcp-fb:* nack pli
a=sendrecv
m=application 5904 UDP/BFCP *
c=IN IP4 10.66.87.207
a=floorctrl:c-s
a=confid:3
a=floorid:2 mstrm:12
a=userid:3
a=setup:actpass
a=connection:new
a=sendrecv
m=application 39878 RTP/AVP 125
c=IN IP4 10.66.87.207
a=rtpmap:125 H224/4800
a=rtcp:39879
a=sendrecv

```

If the custom port range is not applied as per above log snippet, review the Jabber device configuration XML file on the TFTP server with a web browser ([http://<TFTP\\_SERVER\\_ADDRESS>:6970/<DEVICE\\_NAME>.cnf.xml](http://<TFTP_SERVER_ADDRESS>:6970/<DEVICE_NAME>.cnf.xml)).

```

CSeq: 101 INVITE
User-Agent: Cisco-CSF
Contact: <sip:1553c615-14d6-39e8-0399-af6fdd5ee447@10.66.87.207:50268;transport=tcp>;+u.sip!devicename.ccm.cisco.com="CSFwstest1";video;bfcp
Expires: 180
Accept: application/sdp

```

Allow: ACK,BYE,CANCEL,INVITE,NOTIFY,OPTIONS,REFER,REGISTER,UPDATE,SUBSCRIBE,INFO  
Remote-Party-ID: "1000" <sip:1000@dmaccorm-ucmpub.myotherdomain.net>;party=calling;id-  
type=subscriber;privacy=off;screen=yes  
Supported: replaces,join,sdp-anat,norefersub,resource-priority,extended-refer,X-cisco-  
callinfo,X-cisco-serviceuri,X-cisco-escapecodes,X-cisco-service-control,X-cisco-srtp-fallback,X-  
cisco-monrec,X-cisco-config,X-cisco-sis-7.0.0,X-cisco-xsi-8.5.1  
Allow-Events: kpml,dialog  
Recv-Info: conference  
Recv-Info: x-cisco-conference  
Content-Length: 2246  
Content-Type: application/sdp  
Content-Disposition: session;handling=optional

v=0  
o=Cisco-SIPUA 20391 0 IN IP4 10.66.87.207  
s=SIP Call  
b=AS:4000  
t=0 0  
a=cisco-mari:vl  
a=cisco-mari-rate  
**m=audio 16390** RTP/AVP 114 9 104 105 0 8 18 111 101  
c=IN IP4 10.66.87.207  
a=rtpmap:114 opus/48000/2  
a=rtpmap:9 G722/8000  
a=rtpmap:104 G7221/16000  
a=fmtp:104 bitrate=32000  
a=rtpmap:105 G7221/16000  
a=fmtp:105 bitrate=24000  
a=rtpmap:0 PCMU/8000  
a=rtpmap:8 PCMA/8000  
a=rtpmap:18 G729/8000  
a=fmtp:18 annexb=no  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtpmap:101 telephone-event/8000  
a=fmtp:101 0-15  
a=sendrecv  
**m=video 16398** RTP/AVP 126 97 111  
c=IN IP4 10.66.87.207  
b=TIAS:4000000  
a=rtpmap:126 H264/90000  
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-  
fs=3601;max-rcmd-nalu-size=32000  
a=imageattr:126 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]  
a=content:main  
a=label:11  
a=rtpmap:97 H264/90000  
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601  
a=imageattr:97 recv [x=[32:1:1280],y=[18:1:720],par=1.7778,q=1.00]  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtcp-fb:\* ccm fir  
a=rtcp-fb:\* ccm tmmbr  
a=rtcp-fb:\* nack pli  
a=recvonly  
**m=video 16394** RTP/AVP 126 97 111  
c=IN IP4 10.66.87.207  
b=TIAS:4000000  
a=rtpmap:126 H264/90000  
a=fmtp:126 profile-level-id=42E01F;packetization-mode=1;level-asymmetry-allowed=1;max-  
fs=3601;max-rcmd-nalu-size=32000  
a=content:slides

a=label:12  
a=rtpmap:97 H264/90000  
a=fmtp:97 profile-level-id=42E01F;packetization-mode=0;level-asymmetry-allowed=1;max-fs=3601  
a=rtpmap:111 x-ulpfecuc/8000  
a=extmap:14/sendrecv http://protocols.cisco.com/timestamp#100us  
a=fmtp:111 max\_esel=1420;m=8;max\_n=32;FEC\_ORDER=FEC\_SRTP  
a=rtcp-fb:\* ccm fir  
a=rtcp-fb:\* ccm tmmbr  
a=rtcp-fb:\* nack pli  
a=sendrecv  
m=application 5904 UDP/BFCP \*  
c=IN IP4 10.66.87.207  
a=floorctrl:c-s  
a=confid:3  
a=floorid:2 mstrm:12  
a=userid:3  
a=setup:actpass  
a=connection:new  
a=sendrecv  
m=application 39878 RTP/AVP 125  
c=IN IP4 10.66.87.207  
a=rtpmap:125 H224/4800  
a=rtcp:39879  
a=sendrecv