

CUBE / SBC cheat sheet

Topology

CUCM 192.0.2.30 – SIP – CUBE
192.0.2.40 / 198.51.100.10 – SIP – ITSP
203.0.113.10. The provider sees the SBC,
not every phone.

Normalization

SIP profiles add, strip, or map headers.
Identity may move through P-Asserted-
Identity (RFC 3325). Force early offer only
if the peer refuses an INVITE without SDP.
Keep a before-and-after trace.

UC Lab field card · fictional examples only · confirm RFCs and current vendor docs
before production changes.

Media

- Flow-through (default): RTP anchors on CUBE. SDP c= is the SBC.
- Flow-around: RTP goes end to end. Signaling still hits CUBE.
- Transcode, SRTP-to-RTP, and media DTMF interworking need flow-through.

Encryption

- 5060 SIP UDP/TCP. 5061 SIP TLS. RTP ports come from SDP.
- sips: means TLS on every hop. sip: plus a TLS dial-peer is one hop.
- RTP/SAVP and a=crypto: SDES key in SDP. Use TLS on that signaling.

Sources and go deeper

Sources and go deeper

Opened 2026-10. A row marked confirm has no link, because that page was not verified.

Cisco. Understand IOS and IOS XE call routing.

<https://www.cisco.com/c/en/us/support/docs/voice/ip-telephony-voice-over-ip-voip/211306-In-Depth-Explanation-of-Cisco-IOS-and-IO.html>. last checked 2026-10

Cisco. CUBE configuration guide, dial peers (IOS XE 17.6 onwards).

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/voice/cube/ios-xe/config/ios-xe-book/m_cube-dp.html. last checked 2026-10

RFC. RFC 4733, RTP telephony events. <https://www.rfc-editor.org/rfc/rfc4733>. last checked 2026-10

Cisco. Cisco Unified Border Element product support.

<https://www.cisco.com/c/en/us/support/unified-communications/unified-border-element/series.html>. last checked 2026-10

Protocol and ports. IANA SIP parameters. <https://www.iana.org/assignments/sip-parameters/sip-parameters.xhtml>. last checked 2026-10

Protocol and ports. IANA service names and port numbers.

<https://www.iana.org/assignments/service-names-port-numbers/service-names-port-numbers.xhtml>. last checked 2026-10

Community. Cisco Community, Collaboration knowledge base.

<https://community.cisco.com/t5/collaboration-knowledge-base/tkb-p/4691-docs-collaboration-voice-video>. last checked 2026-10

Wikipedia. Session Initiation Protocol (Wikipedia).

https://en.wikipedia.org/wiki/Session_Initiation_Protocol. last checked 2026-10

Wikipedia. Voice over IP (Wikipedia). https://en.wikipedia.org/wiki/Voice_over_IP. last checked 2026-10

Wikipedia. English Wikipedia article for Cisco Unified Border Element. confirm. That title returned HTTP 404. last checked 2026-10

RFC. RFC 3261, SIP. <https://www.rfc-editor.org/rfc/rfc3261>. last checked 2026-10

RFC. RFC 3550, RTP. <https://www.rfc-editor.org/rfc/rfc3550>. last checked 2026-10

RFC. RFC 3711, SRTP. <https://www.rfc-editor.org/rfc/rfc3711>. last checked 2026-10

Protocol and ports. CUCM 15 TCP and UDP port usage.

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/15/systemConfig/cucm_b_system-configuration-guide-15/cucm_m_tcp-and-udp-port-usage-12-0.html. last checked 2026-10

RFC. RFC 4566, SDP. <https://www.rfc-editor.org/rfc/rfc4566>. last checked 2026-10

Cisco. Cisco Unified SRST product support.

<https://www.cisco.com/c/en/us/support/unified-communications/unified-survivable-remote-site-telephony/series.html>. last checked 2026-10

Cisco. Cisco Unified Communications Manager product support.

<https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/series.html>. last checked 2026-10

Cisco. System Configuration Guide for CUCM, Release 15.

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/15/systemConfig/cucm_b_system-configuration-guide-15.html. last checked 2026-10

Wikipedia. English Wikipedia article for Survivable Remote Site Telephony. confirm. That title returned HTTP 404. last checked 2026-10

Webex. Get started with Local Gateway. <https://help.webex.com/en-us/article/t9xctu/Get-started-with-Local-Gateway>. last checked 2026-10

Webex. Configure Local Gateway on Cisco IOS XE for Webex Calling.

<https://help.webex.com/en-us/article/jr1i3r/Configure-local-gateway-on-IOS-XE-for-Webex-Calling>. last checked 2026-10

Webex. Get started with Webex Calling. <https://help.webex.com/en-us/article/8jda92/Webex-Calling>. last checked 2026-10

Protocol and ports. Port reference for Webex Calling.

<https://help.webex.com/en-us/article/b2exve/Port-Reference-Information-for-Cisco-Webex-Calling>. last checked 2026-10