Server core (WCS Core)

The Core includes the following subsystems:

Submodule	Ports	Format	Protocol	Description
Websocket server	8080, 8443	Websocket frames, JSON	TCP	Provides support for HTML5 Websocket and Secure Websocket
SIP client	30000-31000	SIP	TCP, UDP	Provides support for SIP to work with PBX SIP servers and SIP Proxy
RTMFP server	1935	AMF3	UDP	Provides support for the RTMFP protocol to work with Flash Player
RTMP server	1935	AMF3	TCP	Provides support for the RTMP protocol
RTMP client	33001-34000		TCP	
RTSP server	554	RTSP-packets	TCP	Provides support for the RTSP protocol
RTSP client	32000-32999	RTSP-packets	TCP	Fetches a stream from another server via the RTSP protocol followed by opening of RTP ports to receive traffic and play in a browser
CDN client	34001-35000	Websocket frames	TCP	Provides support for CDN based on WCS servers
CDN server	8084		TCP	
WebRTC agent	34001-35000	Websocket frames	TCP	Provides support for interaction with other WCS servers via Websocket/WebRTC
HTTP server	8081, 8444	HTTP, JSON	TCP	Provides support for HTTP and HTTPS protocols for web interface,WCS RESTful API,load balancing and requests for statistics
HLS server	8082, 8445	HLS	TCP	Provides support for HLS over HTTP/HTTPS
RTP module	31000-31999	Audio codecs: Opus, G.711, Speex, G.729, AAC and video codecs: H.264, VP8	UDP	Provides support for RTP and SRTP protocols to exchange audio and video traffic
ICE, DTLS, RTCP	31000-31999	ICE packets, DTLS packets, RTCP packets	TCP, UDP	Provides support for WebRTC technologies (including WebRTC over TCP) to establish connection with an ICE and DTLS web browser, as well as support for RTCP profiles RTP/AVP, RTP/SAVPF
JMX Server	50999	JMX	TCP	Monitors the server process using the JMX console or Visual VM.
Metrics server	7777	Server functioning metrics	TCP	Local interface to translate server functioning metrics
Core CLI SSH	2001	SSH	TCP	Core CLI support
Audio Transcoder		audio tracks in streams		Convert one media data format to another
Video Transcoder		video tracks in streams		
Mixer		streams on the server		Mixes streams

A simplified flowchart of Core operation:

Web SDK | Android SDK | iOS SDK

HTTP client
RTMP client
RTMFP client
RTSP client
JMX client
HLS client

WCS Core

WCS server
SIP server
RTSP server
RTMP server
REST hooks → Web server

REST HTTP client
SSH client