CaféX Fusion™ Client software development kit (SDK) provides a framework for developers to embed real-time communications easily within mobile and web business application platforms. Web Real-Time Communication (WebRTC) is utilized with no browser plugin to ensure seamless integration into existing SIP-based voice, video and messaging systems. Voice & video chat, instant messaging and presence, and application event distribution (screen sharing, annotation, file push, etc.) are extended beyond the enterprise to mobile and web applications.

Capabilities: enables mobile and web developers to extend existing enterprise communications assets to business applications natively across iOS, Android and JavaScript platforms.

Users can make and receive voice and video calls, send and receive instant messages, communicate presence status, do screen-sharing, remotely control another's app, draw on screen, and push files directly within a browser-based (with no plugin) or mobile application.

Fusion Client SDK gives organizations an on-ramp for WebRTC even if their infrastructures do not support many of the advanced standards associated with current browser and smartphone implementations. This integration is accomplished via a WebRTC-to-SIP signaling gateway and an RTP media broker to translate and normalize communication sessions between web application clients and traditional enterprise endpoints.
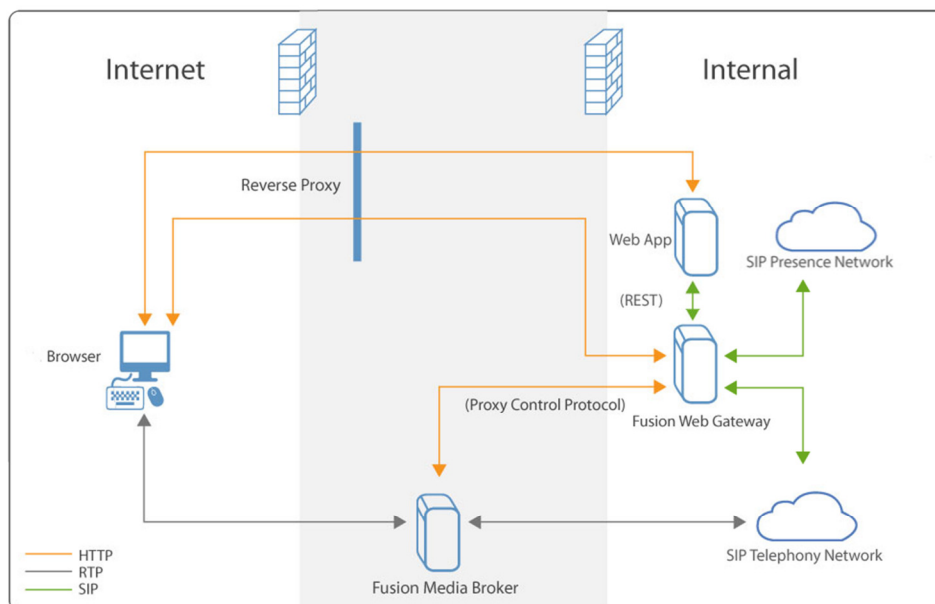
Benefits: provides the following value for enterprises and service providers:

- Device agnostic 'clientless' web-based voice & video for enhanced B2B & B2C interactions
- Transformed customer service with seamless collaboration experience within applications
- Enhanced flexible working and business continuity solutions
- Reuse and extension of existing corporate communication infrastructure & devices
- Reduced 800 and mobile calling costs by bringing external voice traffic onto the corporate network
- Lower IT total cost of ownership with no separate UC client or plugin to deploy and support, off-the-shelf servers with virtual machine option, one HTTP(S) port, one SRTP port for media
- Seamless scaling for organizations of all sizes including small footprint developer options

Fusion Client SDK Features

Voice & Video Calling	• Make calls from a mobile or browser-based client application to audio or video devices, including PBX endpoints, SIP video endpoints, conference bridges or other applications enabled with Fusion Client SDK • Receive calls within mobile or browser-based client application • Accept or reject video stream on incoming call (audio only if rejected) • Turn audio or video streams on/off during mid-call with no impact to active stream • View connection quality via network quality indication API • Send dual-tone multi-frequency (DTMF) tones in response to audio prompts (e.g. to dial into an audio-conference or interactive voice response system)
Media Transcoding	• Opus HD audio to G.711 audio transcoding • G.711 to G.729 audio transcoding • VP8 to/from H.264 video transcoding • Transcoding framework for additional use cases
Instant Messaging & Presence	• Integrates with existing IM & Presence systems (Cisco Unified Presence Server and Microsoft Lync) to extend capabilities to the client application • Users can set presence status, view contacts' presence, send & receive messages
Application Event Distribution	• Presentation & shared control – users can set and modify data within applications and present it in real-time to other users with shared control and no 'ball passing' • Screen sharing – a user's application view can be shared with a remote user (e.g. contact center agent) • Document push – an enterprise user can push documents (pdf only at present) to a public user via HTTP • Remote control – an enterprise user can click to invoke action on a public user's application (the public user can continue to interact with the app as well) • Annotation – an enterprise user can draw on the shared portion of the public user's screen; drawing is visible on the public user's app (app is not aware of annotation)

Network Components

Component	Description	Function(s)	Dependencies
Fusion Client SDK	Enhances client applications with voice, video, IM, presence & application event distribution sessions	Uses WebRTC to expose voice/video within browsers (smartphone libraries follow WebRTC spec for consistency) Integrates with Cisco Jabber & Microsoft Lync IM/presence systems Application event distribution with shared control and no ball passing Provides platform specific (iOS, Android, JavaScript) libraries	Mobile: iOS, Android Browser: Chrome (28+) Firefox (26+) Opera (18+) Safari (7.0+ w/ plugin) IE (8,9,10,11 w/ plugin 32/64 bit) Security: HTTP(S) & SRTP
Client (Customer Provided)	Mobile or browser user interface	Provide user interaction with web app Present collaboration capabilities to user via the Fusion Client SDK and interaction with Fusion components	
Web Application (Customer Provided)	New or existing web application enabled with collaboration capabilities via Fusion Client SDK	Authenticate users and determine which services should be available to them Create and end sessions on Fusion Web Gateway Provide UI content to client	Amended to communicate with Fusion Web Gateway to start/stop sessions
Reverse Proxy Server (Customer)	Ensures network security for external devices	Retrieve resources from Fusion Web Gateway on behalf of client application	WebSockets support Resides in DMZ for external clients
Fusion Web Gateway	Removes signaling complexity between client app and SIP endpoints Provides SIP interoperability across enterprise	HTTP to SIP signaling conversion Control session creation by clients Rely on HTTP for control channels enabling security through firewall, reverse proxy, etc. Create and manage sessions for voice/video, IM & presence and application event distribution Communicate with client application using WebSockets protocol Normalize SIP signaling across enterprise Normalize SIP for Instant Messaging & Presence Extensions (SIMPLE) for processing by UC presence platform	Runs on Fusion Application Server (FAS) 2.0 which requires load balancer Cisco presence proxy runs on FAS 2.0, (Linux & Windows) Msft presence proxy runs on FAS 2.0 (Windows only) DNS resolvable
Fusion Media Broker	Converts and adapts media between external clients and enterprise devices; for inbound traffic, simplifies & limits RTP for legacy devices; for outbound traffic adds additional features for browser & mobile clients	Convert between client app SRTP and SIP compatible RTP streams Translate SDP for enterprise use Audio & video transcoding Network impairment handling (NACK/PLI) Adaptive rate control (REMB/TMMBR) Load balancing (CPU) SRTP termination point STUN termination point Media port multiplexing	RTP routes based on SDP passing through Fusion Web Gateway Resides in DMZ Video transcoding requires separate VM (vmWare 5.0+) Video calls require 1Mbps up/down, audio ~100Kbps

Bare Metal or Virtual Machine Requirements

Fusion Web Gateway (in Green Zone)

- Dual processor - 2.5GHz (8 core per CPU)
- 8 cores (minimum)
- 1.5GB Memory per core (minimum)
- 100 Gig HD RAID1 or greater
- Minimum one (1) active GigE network interface
- Operating system:
  - DD64-bit x86 Red Hat Enterprise Linux Advanced Platform version 6.4 /6.5 OR CentOS 6.4

Fusion Media Broker (in DMZ)

- Dual processor - 2.5GHz (8 core per CPU)
- 16 cores (minimum)
- 1GB Memory per core (minimum)
- 100 Gig HD RAID1 or greater
- Minimum one (1) active GigE network interface
- Operating system:
  - DD64-bit x86 Red Hat Enterprise Linux Advanced Platform version 6.4 /6.5 OR CentOS 6.4

Software License Ordering Information

All software licenses are perpetual with a one-time charge. One year software maintenance is mandatory and priced separately. For pricing information please contact a CaféX representative.

CaféX SKU	Description	Features
CX-FLA-300-E	Fusion Live Assist ENHANCED Concurrent Session License	• In-application voice, video & chat for web & mobile • Live Assist® (app screen share, remote control, annotate, file push) • Enterprise integration (SIP) • Includes SDKs & gateway components
CX-FLA-300-P	Fusion Live Assist PREMIUM Concurrent Session License	• All features in Live Assist ENHANCED + • Contact center CTI connector with context passing to support IVR bypass, callback, virtual hold, omnichannel, analytics, etc. • Visual IVR (one port)
CX-FLA-300-UPG	Fusion Live Assist UPGRADE Concurrent Session License	• Upgrade from ENHANCED to PREMIUM

About CaféX

CaféX is a leader in providing real-time engagement solutions. Powerful developer toolkits for WebRTC and mobile B2C collaboration make it simple for businesses to connect customers, partners and employees from within mobile and web applications. Gateway components extend existing enterprise communications assets beyond the four walls to all types of applications and endpoints, providing new interaction channels for the enterprise. Connect with CaféX on www.cafex.com.