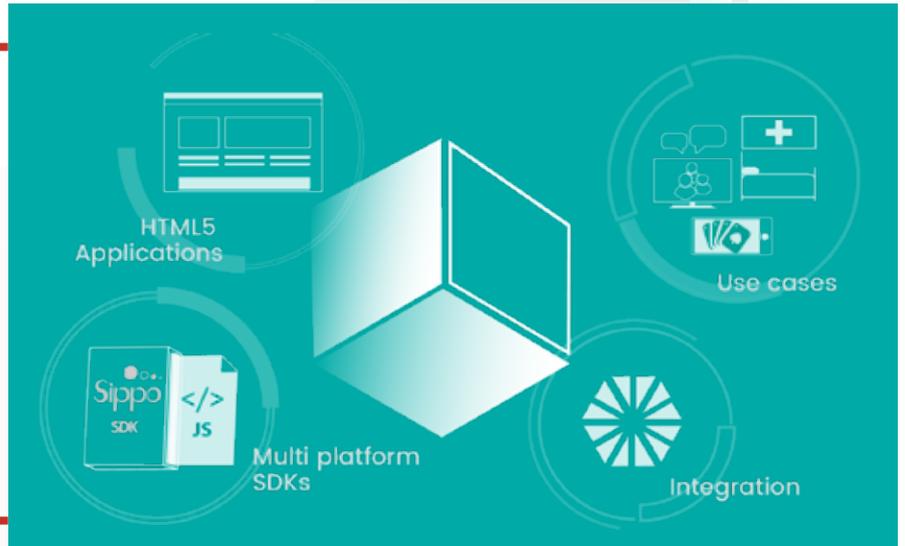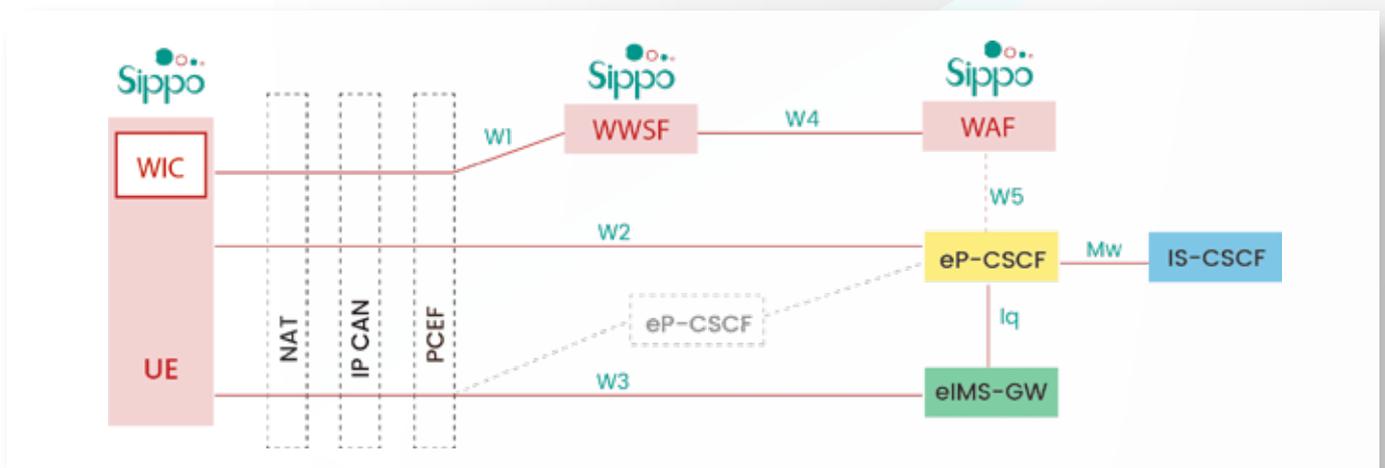# Sippo ॰ wac

Telco-class real-time communication application server for the exposure of network APIs.

Sippo wac provides tools for developers to create real-time communication apps while managing all the complexity related to device-fragmentation, AAA interconnection, service enablement and troubleshooting and user management.

HTML5 Applications

Use cases

Multi platform SDKs

Integration

// KEY FEATURES

Messaging	Module based services	Auth federation	Vendor abstraction	Security

// IMS integration

Sippo WAC acts as WWSF and WAF in the IMS architecture proposed by the 3GPP:

WIC
WebRTC IMS Client

WIC is an application using the WebRTC extensions specified in WebRTC 1.0 spec, as any of the WebRTC apps built using sippo.js.

WWSF
WebRTC Web Server Function

WWSF is the initial point of contact in the Web that controls access to the IMS communication services for the user, that is one of the features of the WAC.

WAF
WebRTC Authorisation Function

WAF supports the WWSF and eP-CSCF during the authentication and identity validation process.

// Exposing your network capacities

Sippo Abstraction Layer is part of Sippo WAC. This abstraction layer helps to hide all the complexity behind the different implementations of WebRTC by web browsers and supports all the signaling protocols, so applications can work with any WebRTC gateway vendor.

SippoJS is an orca.js compatible javascript API that allows third parties to develop applications in the Sippo ecosystem taking advantage of all the functionalities that the WAC provides.

In addition, the Sippo WAC exposes a **service API (S-API)** to manage services like authentication, accounting, user privileges, user provisioning, contact management, scheduled meetings, security and reporting information. This interface makes possible to connect third- party elements (HSS, BSS, OSS, etc.) to make possible to extend existing telco solutions to the web.

Both **SippoJS** and the Sippo WAC **S-API** are fully documented and accessible for partners and customer and bring the right tool to success in the real field deployments of WebRTC.

// Management - Sippo manager

Sippo manager is a web interface for management of users, campaings and agents, including reporting and troubleshooting.

All this management information is easely available through the Sippo Service API (S-API).

// General features

File transfer
→ Send files between peers.
→ Accept / reject file transference.
→ Store the files transfered on the server side.
→ Cancel on-going transferences.

FEATURE

Chat service
→ Chat services for 1-to-1 or n-to-n based on WAPI messages.
→ Chat service for 1-to-1 based on SIP instant messaging.

FEATURE

Call routing services
→ Notify a single user or group about an incoming call.
→ Notify an external service about an incoming call.
→ Check external REST API services to assign a call to an specific user.
→ Route a call based on the specific WAC username.
→ Route a call based on the user friendly name (local agenda).
→ Route a call based on the IMS credentials username (SIP address)

FEATURE

wac

Datachannels & datapipes
→ Use datachannels.
→ Use datapipes to share custom information between apps.

FEATURE

Presence
→ Automatically / manually set user specific presence status.
→ Retrieve user specific presence status

FEATURE

◉[REC]

Recording capabilities
→ Record 1-to-1 and group calls.
→ Export recording files to an external storage server.
→ Store partial recording of a call.
→ Store events and timestamp marks on the recording.

FEATURE

Adaptive architectures
→ On premises deploy over hardware host, VMware, docker, Azure, AWS.
→ Adaptive architecture based on services and backends.
→ Multiple feature implementations (backends) for the same service (feature).
→ Configurable access to network interfaces.
→ Integrated HTTP static server to serve the Sippo Apps integrated within the WAC or 3rd party apps.
→ Support HA architecture based on cluster deployment.
→ Multi Tenant support based on domains.

ARCHITECTURE

Sippo wac

Push and notification service
→ Wakeup a background app to receive an incoming call.
→ Notify an app about other communication events (chat, file transfer, etc).
→ Noitfy external users about a meeting using SMS or email.

FEATURE

MANAGEMENT

Data exposition (SAPI & WAPI)
→ Secure interface (WSS) of communication between SippoSDK apps and the Sippo server.
→ Per feature endpoint permission customization.
→ Secure interface Service REST API exposed from Sippo server available to be consumed by third party apps (SAPI).

MANAGEMENT

Authentication & login
→ Validate requests from anonymous users, user-pass pair, custom token and others.
→ Create sessions based on user-pass schema, custom token, oAuth2for MS Active Directory, Google, Facebook, etc.
→ Create sessions based on digital certificates pre-installed into the browser's device.
→ Grant login, secure credntials and avatars to system users.
→ Grant securte credentials for system users.
→ Generic key-value pairs for a system user

MANAGEMENT

User management & policies
→ Asign capabilities to specific users, domains, applications, etc.
→ Handle specific user/domain contacts.
→ User's NAB (Network address book).
→ Retrieve contacts from device.
→ Handle contacts from a MS active Directory server.

MANAGEMENT

Management services
→ Admin CLI for authentication management.
→ Admin CLI for user profile and capabilities management.

Activity logs and monitoring
→ Session logging: user registration timestamp and presence status.
→ Call logging: callerID, calleeID, timestamps, end reason, Qos (packet loss, jitter, codecs used), etc
→ Log stack messaging (WebRTC signaling).
→ Log WAPI messages (app signaling) and SAPI messages (managment commands: CLI & 3rd party).
→ QoS alarms: notifications per packet loss treshold.
→ SNMP system monitoring support.

// Service API methods

ALARMS
Exposition of alarm entries data

CALL ALARMS
Create alarms based on QoS data

CALL CONTROL
Create/update/end/list calls between peers

CALLSTATS
Exposition of QoS data

CAPABILITIES
Exposition of user capabilities

CHAT
Create/update/end/list chat rooms between peers

CONFERENCES
Create/update/end/list conference calls

CONTACTS
Create/update/remove/list user contacts

CREDENTIALS
Create/update/remove/list user credentials

DATAPIPE
Create/update/remove/list datapipes to transfer data

DOMAINS
Create/update/remove/list system domains

FILESTORAGE
Upload/update/remove/list media files into the system

MEETINGS
Create/list scheduled calls between users

LOGIN - OAUTH
Ability to grant authentication

PRESENCE
update/list users presence

REMOTELOG
Log all SippoSDK activity

SERVICES
Exposition of current Sippo running services

STATUS
Exposition of current status of the Sippo server

SESSIONS
Create/update/remove/list user sessions

USERSETTINGS
Create/update/remove/list user settings

USERS
Create/update/remove/list users and their capabilities

USERGROUP
Create/update/remove/list user groups

// Sippo products

Sippo . collaborator

Fully-featured WebRTC-enabled unified communication suite with advanced capabilities.

Sippo . hub

Provider of modules for pre-build use cases and an open API/SDK to support and create new ones.

Sippo . ecco

Telco services in a mobile-focused easy-to-use application for residentials and enterprises.

Quobis is a leading European company in the delivery of carrier-class unified communication solutions for telcos and enterprises.

Quobis is well-known as one of the leaders in the deployment of WebRTC technology after being involved in the release of the industry-first application server, called Sippo WebRTC Application Controller.

Today, this element is part of the core network several telcos worldwide. In addition Sippo is helping enterprises to defeat the challenges behind digital transformation processes using real-time communications

The company is headquartered in Vigo, Spain with partners throughout the world.