



The MjSIP development toolkit

*The quickest route to develop
SIP applications and services*



ABOUT MjSip...

MjSip is a complete java-based implementation of a SIP stack.

It provides in the same time the API and implementation bound together into the MjSip packages. MjSip is available open source under the terms of the [GNU GPL License](#) (General Public License) as published by the Free Software Foundation. SIP (Session Initiation Protocol) is the IETF (Internet Engineering Task Force) signaling standard for managing multimedia session initiation; it is currently defined in RFC 3261. SIP can be used to initiate voice, video and multimedia sessions, for both interactive applications (e.g. an IP phone call or a videoconference) and not interactive ones (e.g. a Video Streaming), and it is the more promising candidate as call setup signaling for the present day and future IP based telephony services. SIP has been also proposed for session initiation related uses, such as for messaging, gaming, etc. The MjSip stack has been used in research activities by Dpt. of Information Engineering at [University of Parma](#) and by [Die - University of Roma "TOR VERGATA "](#) and is currently commercially exploited by [CREALAB](#).

MjSip FEATURE...

MjSip includes all classes and methods for creating SIP-based applications. It implements the complete layered stack architecture as defined in RFC 3261 (Transport, Transaction, and Dialog sublayers), and is fully compliant with the standard. Moreover it includes higher level interfaces for Call Control and User Agent implementations. MjSip comes with a core package implementation that includes:

- ➔ all standard SIP layers and components,
- ➔ various SIP extensions (already defined within IETF),
- ➔ some useful Call Control APIs (e.g. Call-Control, UserAgent, etc.),
- ➔ a reference implementation of some SIP systems (proxy servers and UAs).

MjSip SERVER...

A MjSip-based server implementation is also available. It can be used as Registrar, Redirect, Stateless Proxy or State full Proxy.

The main features of the MjSip Server are:

- ➔ it is easily configurable via a simple text-based file,
- ➔ it is fully compliant with RFC 2631 and successors, moreover it is backward compatible with the previous RFC 2543 standard (e.g. it support both loose and strict routing, different expires field formats, etc.),
- ➔ it can act as Registrar, and/or Proxy, and/or Redirect server,
- ➔ both a stateless or state ful implementations are available,
- ➔ it include a simple java-based local database, used for maintain user contacts and/or authentication credentials,
- ➔ it implements standard Digest authentication (when selected),
- ➔ it can easily be interfaced with external LDAP repository or MySQL database (a example of such interfaces will be soon available),
- ➔ it can fork calls to more than one contact URLs (it supports multiple registrations),
- ➔ it is possible to select different registration policies (register only pre-registered/known users, or also new users),
- ➔ it is possible to select different proxy policies (proxy only calls coming from registered users and/or directed to registered users, or from/to all users),
- ➔ it can authoritatively administrate multiple domains,

MjSip UA...

A very simple MjSip-based User Agent (UA) implementation is also available. It can be used with a GUI (Graphical User Interface) or command-line interface.

The main features of the MjUA are:

- ➔ it is easily configurable via a simple text-based file,
- ➔ it is fully compliant with RFC 2631 and successors, moreover it is backward compatible with the previous RFC 2543 standard,
- ➔ it supports both audio and video; audio is supported through a pure-java-based implementation, a JMF-based implementation, and through external audio applications like RAT (Robust Audio Tool); video is supported through a JMF-based implementation and through external video applications like VIC (Video Conferencing Tool),
- ➔ it supports call transfer and redirection,
- ➔ it supports both direct UA-to-UA calls or Proxy-routed calls,
- ➔ implements standard Digest authentication (when requested),
- ➔ it also supports only calls signaling (for testing),
- ➔ it can redirect media to or reading media from file,

See the MjSip configuration file or the shell-based help for a complete list of features and options.

The MjUAs (CommandLineUA and GraphicalUA) are available open source under the terms of the GNU GPL license (general Public License), and can be easily modified and extended as required.

Is distributed as **jar binaries** or together with the mjsip stack with all **source files**.

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