Kamailio 6.0 (development) update

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About GILAWA

real-time communication - Management, consulting, training and development for real-time communication solutions for global clients

Kamailio services - Development of new features and product enhancements for Kamailio services, since 2007
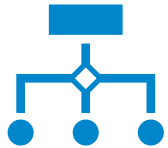
Open source - Integration of in-house developments into open source projects

Technical Consultancy - Consulting and implementing performance optimization, availability and security

Kamailio for voice infrastructure (1/2)

"SBC" functions

Load-balancing and security checks

Topology hiding

Network address translation for SIP and media

Transcoding

Application services

Device/Phone registration

Call routing

Authentication Authorization and Accounting

Robocall/VoIP Spam mitigation

Presence services

Dialog-info

Message-waiting Indication

Device integration

Kamailio for voice infrastructure (2/2)

Translation functions

WebRTC gateway scaling

Adapting proprietary voice components

Interfacing with public commercial cloud services (like MS Teams or other)

IMS/NGN functions

Providing different IMS applications/functions for mobile networks

Interfacing with different IMS protocols or commercial components

Kamailio 6.0 stats

▶ One year development effort from many developers and other contributors

▶ Release finished on 29th January 2025

▶ This is the 27th major release after 24 years of project activity

▶ 1800 changes done from more than 40 contributors

▶ More than 39000 changes in master branch

SER •••••

OpenSER/Kamailio

OpenSIPS

2001	02	03	04	05	06	07	08	09	10
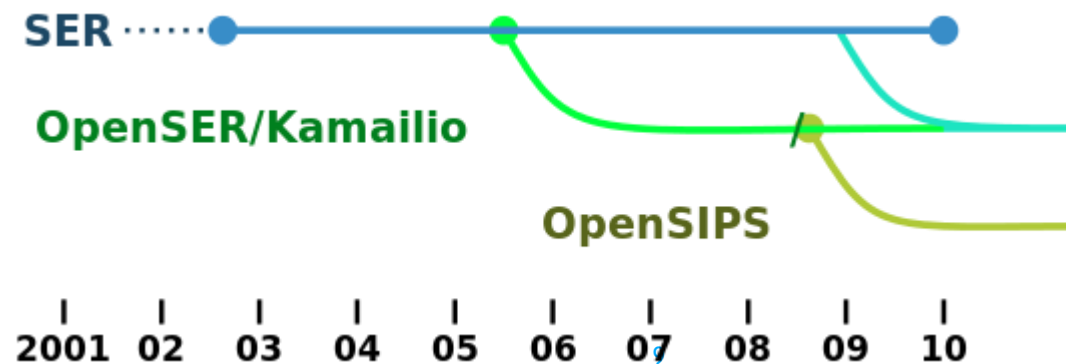
Kamailio 6.0 highlights (1/2)

▶ New UDP receiver mode for easier and greater scaling

    ▶ new option to use multi-threaded UDP receiving for all listen sockets

    ▶ per listen socket option to receive either in multi-process or multi-threaded mode

    ▶ ability to listen on a range of ports on the same socket definition

▶ Improved HTTP support

    ▶ support for HTTP2 in the http client module and ability to access HTTP response headers

    ▶ support for HTTP2 as server via the nghttp2 module

▶ Most of the module functions have now support for providing parameters with variables

Kamailio 6.0 highlights (2/2)

▶ Standalone IMS AKAv1-MD5 authentication support without HSS server for IMS

▶ Evaluation of configuration template files with config variables

▶ Ability to set stronger authentication hashing algorithm (e.g., MD5, SHA-256) per SIP request

▶ Many new variables and transformations in the configuration language

▶ Many changes and extensions to existing modules

▶ Details: https://www.kamailio.org/wikidocs/features/new-in-6.0.x/

Kamailio 6.0 development changes

▶ Support to compile and install using Cmake build tools

  ▶ better integration into modern development environments

  ▶ easier development and future extensions

  ▶ tutorials: https://www.kamailio.org/wikidocs/tutorials/cmake/

▶ Internal libraries are directly linked to the core

  ▶ better integration into Linux distributions

  ▶ easier packaging

▶ Several shared memory structures no longer destroyed individually at shut-down

  ▶ easier module development and debugging

Kamailio 6.0 module changes

▶ Five new modules were added in this release

▶ ims_qos_npn: enhanced version of IMS QoS implementation (link)

▶ nghttp2: HTTP2 server module implementation (link)

▶ presence_dfks: presence support for Device Feature Key Synchronization (link)

▶ pvtpl: evaluation of template files with config variables (link)

▶ topos_htable: htable storage for topology stripping (topos) module (link)

▶ Several old and obselete modules were removed and are now available in the module archive repository (auth_identity, app_lua_sr, app_sqlang, app_mono, db_cassandra, osp, print, print_lib)

Kamailio 6.0 changes for operations

▶ Client-side implementation for overload control in dispatcher (RFC 7339)

▶ Content of the DNS cache can be loaded from a file (e.g. to work without a DNS server)

▶ Prometheus extensions

　　▶ uptime and private memory statistics exported

　　▶ support for tagging different exports

▶ Database connect "on demand" option for sqlops module and rabbitmq

▶ sqlite improvements for concurrency

▶ TLS config option to set the password for private key files

▶ Extensions in sipcapture for tracing

Thank you

- Thank you – any questions?

- Hope to see you around or other conferences!

Thank you

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