

Kamailio development

Update for FOSDEM 2019

Agenda

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- ▶ About Kamailio
- ▶ New in release 5.2
- ▶ Changes in development
- ▶ Contribution & Community
- ▶ Release planning & Outlook
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About me

- ▶ Henning Westerholt
- ▶ With Kamailio project since 2007
- ▶ Core developer of the Kamailio project, member of management board
 - ▶ Core, database work and different other modules
 - ▶ Administration, code quality, quality assurance
- ▶ Senior IT Manager with a broad experience in product IT and internal IT
- ▶ Consulting for Kamailio and Voice over IP services

About Kamailio

- ▶ Kamailio®
 - ▶ Carrier grade SIP Server released under GPL, in development since 2001
 - ▶ Building large platforms for VoIP and real-time communications
 - ▶ Useful for scaling up gateways, PBXs or servers like Asterisk or FreeSWITCH
- ▶ Active and diverse development community
- ▶ Statistics from last month
 - ▶ 20 authors with over 220 commits to git repository
 - ▶ About 30 pull requests merged, 15 issues closed
 - ▶ Two maintenance versions released (5.2.1 and 5.1.7)
- ▶ Extensive core functionality and over 200 extension modules

New in Kamailio 5.2

- ▶ Core extensions and refactoring
 - ▶ Unification of module interface
 - ▶ Many new function exports for scripting modules (KEMI)
 - ▶ Many parameters and internal APIs additions/improvements
- ▶ Modules
 - ▶ New modules `acc_json`, `app_python3`, `app_ruby`, `db_redis`, `ims_ipsec_pcscf`, `pua_json`
 - ▶ Extensions in over 45 existing modules
- ▶ Extensions in control commands, new testing suite etc..
- ▶ Complete list: <https://www.kamailio.org/wiki/features/new-in-5.2.x>

Development changes

▶ New module interface, proprietary modules need adaptations.

▶ Example:

- ▶ "tm", /* module name */
- ▶ DEFAULT_DLFLAGS, /* dlopen flags */
- ▶ cmds, /* cmd (cfg function) exports */
- ▶ params, /* param exports */
- ▶ tm_rpc, /* RPC method exports */
- ▶ 0, /* pv exports */
- ▶ reply_received, /* response handling function */
- ▶ mod_init, /* module init function */
- ▶ child_init, /* per-child init function */
- ▶ tm_shutdown /* module destroy function */

Development changes

- ▶ Memory error handling review for complete core, modules ongoing
- ▶ Remember that all memory allocations can fail, log an error in this case
- ▶ Helper for memory logging available, you should use them
 - ▶ PKG_MEM_ERROR, SHM_MEM_ERROR and other
 - ▶ Header file *core/mem/[pkg.h, shm.h]*
 - ▶ Also support variable messages with „_FMT“ function, details at:
<https://github.com/kamailio/kamailio/commit/d3b3e87a2d39992d1da291f552869f14375425de>
- ▶ Header file cleanup in core
 - ▶ Don't include *core/[mem.h, shm_mem.h]* anymore
 - ▶ Cleanups of #define and #ifdef ongoing, please don't add new ones if possible

Development changes

- ▶ Review of error checking for external system calls and library functions
- ▶ Please check for error in this cases as well

- ▶ New in modules and core
 - ▶ rtp_media_server, secfilter
 - ▶ Support for rich redirects
 - ▶ Extensions in rr, cnxcc,htable, pv, pipe..
 - ▶ Core dns latency logging
 - ▶ Bugfixes in IMS modules
- ▶ Details (draft) <https://www.kamailio.org/wiki/features/new-in-devel>

- ▶ Currently still in the beginning of this development phase

Contribution & Community

- ▶ Kamailio introduced a Code of Conduct (as others)
- ▶ Introduced in October 2018, based on the Debian Code of Conduct
- ▶ Applies to communication on-line and offline in the project scope
- ▶ Summary
 - ▶ Be respectful
 - ▶ Assume good faith
 - ▶ Be collaborative
 - ▶ Try to be concise
 - ▶ Be open
 - ▶ https://github.com/kamailio/kamailio/blob/master/CODE_OF_CONDUCT.md
- ▶ Conflicts are handled from the Kamailio Management Board

Contribution & Community

- ▶ Follow our contributing guide
 - ▶ <https://github.com/kamailio/kamailio/blob/master/.github/CONTRIBUTING.md>
- ▶ Use github pull requests for changes, issues for bugs
- ▶ If you need help in your approach or having questions, ask on sr-dev list first
- ▶ For non-trivial changes (e.g. new modules, core changes) ask for review of a (core) developer
- ▶ If you contributing regularly or contributing a complete new module, you will get commit access soon
- ▶ If you don't get a reply after one or two weeks to your pull request, send a reminder - people might be in vacation or traveling

Release planning & Outlook

- ▶ Kamailio uses a time-based release schedule
- ▶ A major version is released every 10-12 months
 - ▶ Development phase of 6-8 month
 - ▶ Followed by a code freeze/testing phase of 2 month
- ▶ Minor version are released roughly every 2 month
- ▶ Release date for next major release not fixed, probably in autumn 2019

- ▶ Development coordination mainly happens over E-Mail lists, sometimes IRC conferences are also done

- ▶ Next major community & development meeting at Kamailio World 2019
 - ▶ Berlin, Germany, 6-8 May 2019

Thank you for your attention

► Contact:

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