OpenSIPS Summit - Keynotes

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Past, Present, Future
What is the most important?
Present - OpenSIPS 2.2
Philosophy

• Consolidate existing features / functionalities
• First milestone for built-in clustering support
Extended Async

- RADIUS support
- LDAP support
- HEP / BIN support
- aysnc sleep()
- Consistent async support (variables, forking, context)
"LACK OF CONSISTENCY CAN BRING ON A LACK OF INTEREST"
Consolidate by consistency - protocols

• WebSocket Secure (WSS) support added
• HEP protocol as module
• BIN protocol as module
Consolidate by consistency - events

- Balancing and Failover support (event_virtual)
- Reliable events (event_flatstore)
Consolidate by consistency - memory

- Easier/uniform way of getting memory statistics
- Monitor memory usage per module
- Easier way to debug memory issues
Consolidate by consistency – SQL caching

- Built-in support for auto data caching
- Easy way of using it for any SQL table
- “ready to be used” concept
- sql_cacher module
Consolidate by consistency – accounting

• Bye, bye flags, welcome functions
• Easier to use and control
• No hidden behavior
Consolidate by consistency – registration state

• Keep track of the registration reachability
• Stateful probing to check
• Tighter integration between the usrloc and nathelper modules
Consolidate by consistency – SSL certificates

- New tls_mgm module to handle SSL certificates
- Used by TLS and WSS protocols
- DB driven provisioning
Consolidate by consistency – SIP capturing

- Improve flexibility and performance
- All chains addressed (siptrace, sipcature, HEP)
- Opens new possibilities for HEP proxying

Perfect integration with
Clustering

The concept of putting together multiple OpenSIPS instances to act a single service.
Clustering

Building a cluster around a DB (in terms of sharing) results into a bottleneck
Clustering

- Built-in support
- Generally available for all modules requiring clustering
- Based on BIN protocol (OpenSIPS-2-OpenSIPS)
- Used for sharing or replicating data
Future - OpenSIPS 2.3
More clustering

• Enhance the clustering support to be fault-tolerant (for nodes) and re-route traffic inside the cluster

• Hot plug-in for new nodes in the cluster

• Distributed User Location based on clustering; support also partitioning scenario.

• MI clustering support (propagate reload command in the entire cluster)
More async

- Add async support for more I/O operations, like DNS, noSQL databases
- Increase consistency at scripting level when comes to async operations (variables lifetime, transactions state)
- “under the hood” enhancements of the async reactor for inter-process communication (ability to pipe a job/task to a certain process)
IMS support

- DIAMETER driver for the AAA interface
- Add support for I-CSCF, P-CSCF, S-CSCF nodes
OpenSIPS, as SIP server, is a part of a large ecosystem of services and applications.
Future - OpenSIPS 3.x
Config File re-work

- Re-structure the provisioning across multiple sections (routing logic to be separated from modules and global parameters)
- Easier module provisioning
- Script variable re-naming to help in understanding the scope of the variables
Config File re-work

```conf
loadmodule [uri] {
    use_uri_table = 0
}

loadmodule [tm] {
    fr_timeout = 5
    fr_inv_timeout = 30
    restart_fr_on_each_reply = 0
    onreply_avp_mode = 1
}
```
Config File re-work

$msg.from.uri.username instead of $fU
$dlg.val(my_var)
$dlg.lifetime
$trans.fr_timeout
Reload of routing logic

- Reload the OpenSIPS routing logic at runtime
- No package loss on network level
- No call / registration / transaction lost
- No downtime!
SIP message modification

• Drop the lumps support
• Apply changes over SIP message in realtime
• All changes must be at SIP-header level
External routing logics

• Be able to use an external application as routing script
• To interact with OpenSIPS SIP stack via a routing API
• Libraries to be provided in various languages (Python, Java, C++)
• The end result?
Thank you for your attention
You can find out more at www.opensips.org
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Questions are welcome