RESTCOMMONE
SIP Servlets
## RestcommOne Core Components

### RestcommOne Connect
- Visual Designer
- Web Browser WebRTC SDK’s
- Mobile WebRTC SDK’s
- RESTful API Layer

### RestcommOne Telecom
- Load Balancer
- SMSC Gateway
- USSD Gateway
- GMLC
- JAIN - SLEE
- SIP Servlets
- Media Server
- jSS7
- SMPP
- JAIN - SIP
- jDiameter
RestcommONE SIP Servlets is a SIP Application Server that enables rapid development and deployment of real-time communication (RTC) products and services using SIP and WebRTC. A powerful application routing mechanism, enables the creation of new products and services by connecting multiple independent services together to support the service business logic required.

RestcommONE applications built upon this Java EE solution include the RestcommONE Session Border Controller and WebRTC to SIP gateway, along with many other similar products and projects. Fully integrated support for next generation technologies like WebRTC and IPv6 enable you to deliver your next real-time communications application with RestcommONE SIP Servlets.

RestcommONE SIP Servlets utilizes Java EE to fully meet the SIP Servlet 1.1 (JSR 289) specification. It works in conjunction with the entire RestcommONE platform to
provide a feature-rich telecom infrastructure for developing, deploying and managing rich media communications products and services.

**RestcommONE SIP Servlets** follow the JSR 289 specification supporting application chaining. Application chaining is where each part of the application is completely independent from one another and can be added and removed at any time. Historically, SIP Servlets implementations have been designed to be supremely fault-tolerant and reliable, the cost is often felt in slow application performance. In contrast, the RestcommONE SIP Servlets platform is fault-tolerant. It is also very fast due to the continued focus on performance enhancements to the messaging stack and application adapter modules. A lot of effort has been made to eliminate non-essential steps and layers of the protocol stack.

**RestcommONE SIP Servlets** has been optimized to treat SIP applications as deployment units. This enables in place rolling updates for applications and services with little or no downtime. It also dramatically improves application performance.
Restcomm ONE
SIP Servlets

Diagram:
- Caller
- Administrator or Web UI users
- Callee

Processes:
- Call Blocking
- Call Forwarding
- Voicemail

Layers:
- Proxy
- B2BUA
- UAS

Protocols:
- SIP
- HTTP
- JDBC

Database:
- Subscriber Profile Database
Key Features and Benefits

- **Multi-tenant SIP Application Server (AS)** enables operators to provide next-generation real-time communication (RTC) applications across multiple branded services.

- **SIP over Websocket and HTML5** supports real-time voice and video applications using SIP and WebRTC.

- **Media Server** (an implementation of JSR 309 using the MGCP protocol) provides a portable interface to create rich media applications (i.e. interactive voice response (IVR), conferencing and speech recognition).

- **IMS SIP Extensions** enable the SIP application server to act as an IMS application server to provide seamless integration into RCS and IMS-based services.

- **Diameter Server** compliant with RFC 3588 enables Authentication, Authorization and Accounting (AAA) through the following interfaces to quickly implement or connect to billing and charging services: Base, CCA, Sh (Client/Server), Rf/Ro, Cx, Dx, Gq’, Rx, Gx, and S6a.

- **DDOS and Congestion Control** mechanisms are built into the server to protect against DDOS and other malicious
attacks. SIP security can also be enabled to mitigate the risk of unauthorized access to sensitive information.

- **Carrier-grade scalability and reliability**, with load balancing and clustering support for automated failover, delivers an excellent user experience for mobile subscribers. Unlike other more limited solutions, all RestcommONE services are load-balanced, providing unparalleled redundancy, especially as the platform scales.

- **On premise and cloud deployment options** provide outstanding flexibility for service provider and enterprise applications. Fully self-contained and highly optimized, the USSD gateway supports both network functions virtualization (NFV) and clustered virtual machine (VM) deployments.

- **Flexible Operations and Monitoring support** using industry-standard protocols including SNMP, Java JMX, JBoss Jopr, and scriptable command line interfaces with full CDR, logging and auditing reporting capabilities.

- **Open Source software origins** means the code is well-documented and tested, allowing your staff to learn, optimize and customize RestcommONE Sip Servlets to your evolving requirements - free from vendor lock-in. Our license subscription model provides indemnification and full support, along with your ability to provide input to our product development roadmap.