

# Session Border Controller

## SBC OVERVIEW:

**Media Routes SBC** is an advanced, comprehensive Policy enforcement point, Session Management and Service Orchestration engine deployed as a network border element for both Enterprise and Service Provider markets. It combines the power of a Session Border Controller with a modern Service Delivery Platform to realize several business-critical use cases and provide a centralized customization, integration and mediation base for its deployment environment.

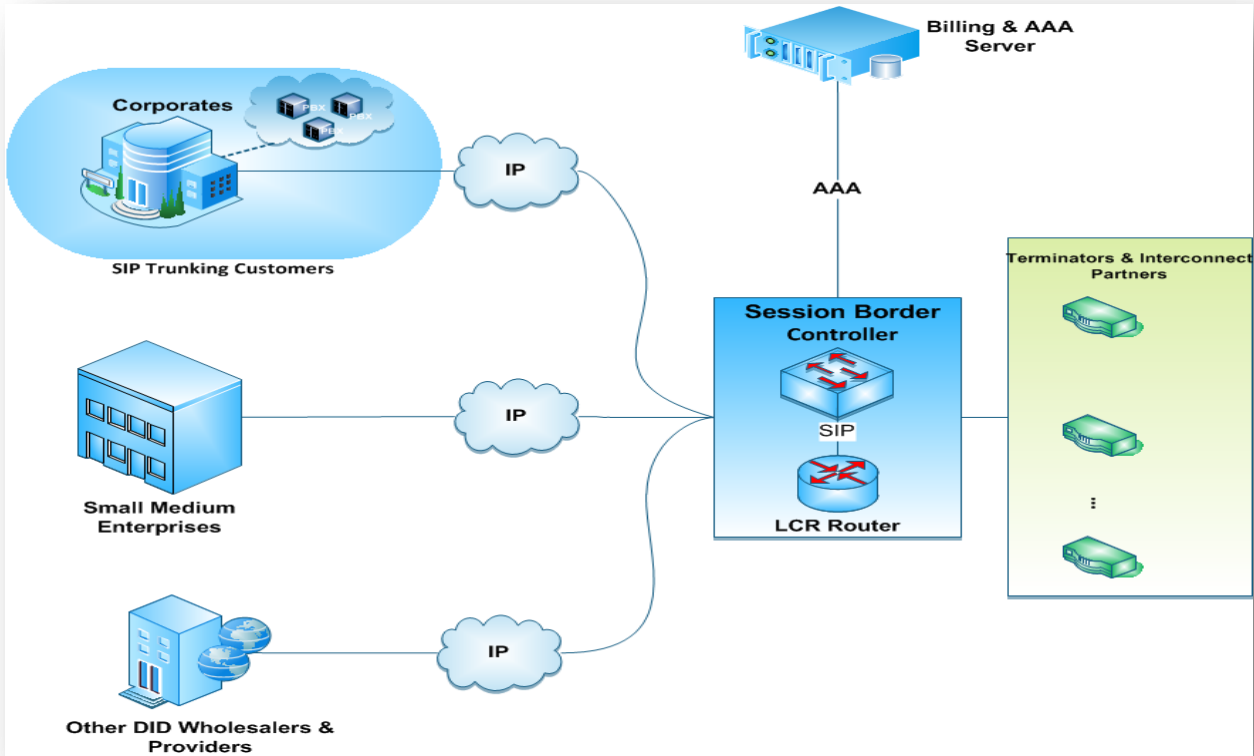
SBC allows control and manipulation of signaling and media packets for secure IP based multimedia communication. It acts as a SIP B2BUA (Back to Back User Agent) and can be deployed at both the Access and Peering or Interconnection side of the Service Provider network.

It can be deployed in any IP based multimedia network and integrates with existing Class 4 & Class 5 Soft-Switches, Media Gateways, and Application Servers etc. over SIP protocol.

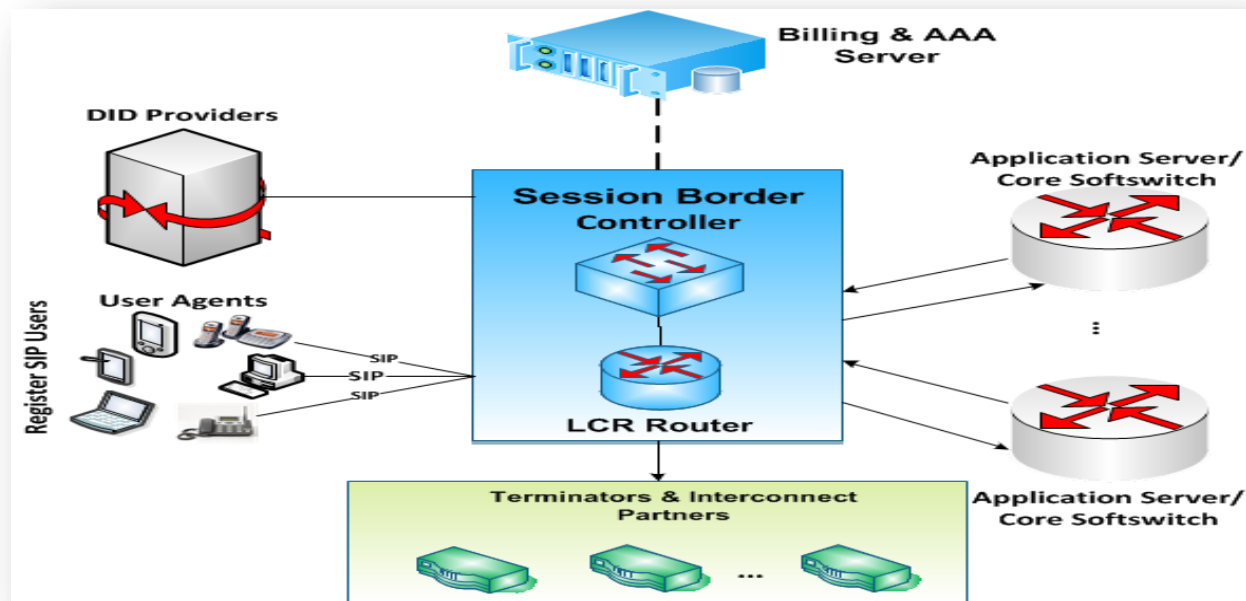
## IMPORTANT BUSINESS USE-CASES:

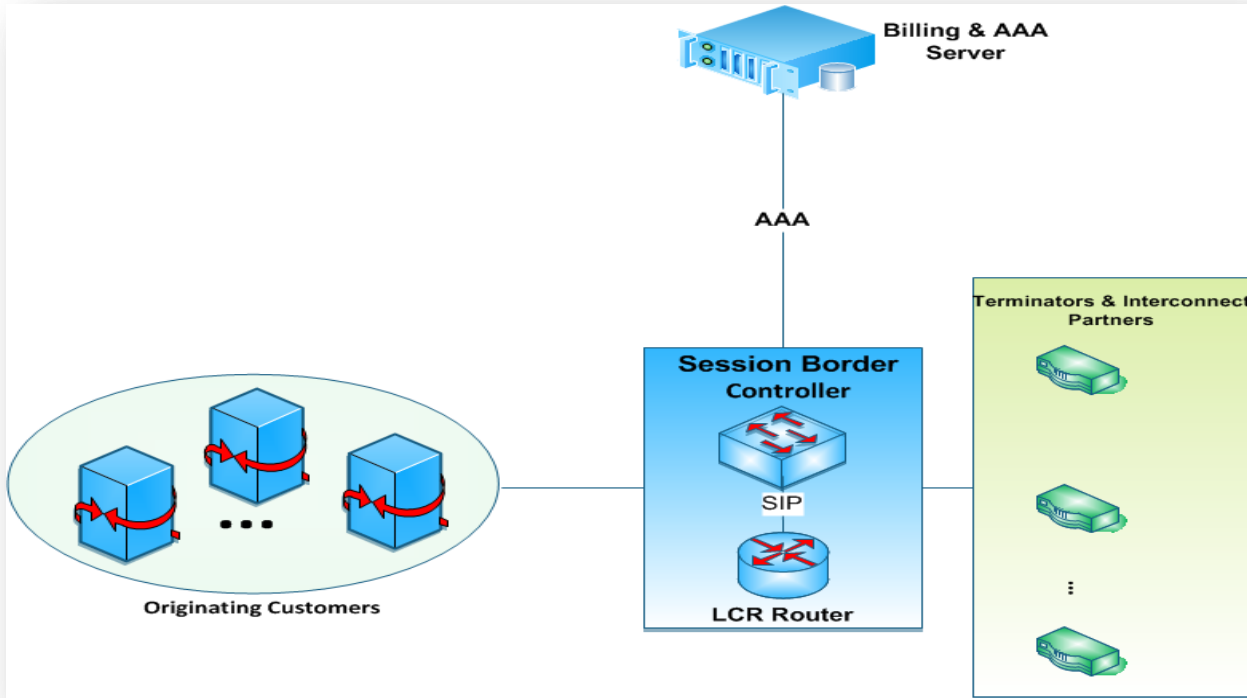
- Terminator Network Management
- Enabling real time / prepaid services
- Connection to LCR
- NAT Traversal
- Media Transcoding
- Simultaneous Ringing
- Topology Hiding
- Real-Time monitoring
- Multiple Application Servers Support
- Multiple Services Support
- Secure Communication
- Congestion Control
- DOS / DDOS Prevention
- Terminator Capacity Control
- Terminator Failover
- Classes of Service
- Outgoing Toll Bypass
- Incoming Toll Bypass
- E911 Support

# SIP TRUNKING APPLICATION



# AS A BORDER ELEMENT FOR CONTROLLED, ACCESS SIDE POLICY ENFORCEMENT





## KEY BENEFITS HIGHLIGHTS:

- Intelligent Session Control, Policy Enforcement and Service Orchestration Engine
- Combines the power of Service Orchestration with state of the art Session Border Control
- Enables advanced, fine-grained Policy Enforcement at both Access and Peering sides of the network
- Valuable for both Enterprises, Small to Medium Service Providers and large Telecom Operators in both fixed and mobile domains
- Acts as a network border element for:
  - CDR aggregation
  - AAA aggregation
  - Inter-domain Routing aggregation
  - Per session data collection and Reporting
  - Billing and settlement integration point
  - Session Routing to Application Servers
  - SCIM (Service Control and Interaction Manager)

Enables extension and enhancement of pre-deployed SIP Applications in terms of capabilities and features

FEATURES
Topology hiding
SIP Back-Back User Agent (B2BUA)
NAT traversal
Load balancing across multiple core servers
SIP Registrar with location database
Registration events notification (Registrar event Package)
Intelligent Proxy for SIP Registrations and other
Non-INVITE based session creating packets
<b>Policy enforcement</b>
<ul style="list-style-type: none"> <li>· Access and Peering Policies Support</li> </ul>
<ul style="list-style-type: none"> <li>· Policy Queries to External Policy Server (optional)</li> </ul>
SIP Header Manipulation and Interoperability assurance
Deep packet inspection
Source IP based Ingress Rate limiting and DOS protection
<b>Media Handling</b>
<ul style="list-style-type: none"> <li>· Relaying</li> </ul>
<ul style="list-style-type: none"> <li>· Trans-Coding</li> </ul>
<ul style="list-style-type: none"> <li>· Mixing</li> </ul>
<ul style="list-style-type: none"> <li>· SRTP (Media encryption)</li> </ul>
<b>Programmability for Service Orchestration &amp; Mediation</b>
<ul style="list-style-type: none"> <li>· JavaScript</li> </ul>
<ul style="list-style-type: none"> <li>· CCXML &amp; JavaScript combination</li> </ul>
Emergency Call Handling
Lawful Intercept

Call Recording
Video Calls Support
<b>Multi-Tenancy Support</b>
· Through extra custom SIP headers
· Source Port Changing
· Special Purpose Sandbox for tenants
Initial filter Criteria Evaluation
<b>Service Selection</b>
· Per Username
· Per domain
· Per Tenant
· Combination of the above
RADIUS client
DIAMETER client (in-progress)
<b>Self-Authentication with PSTN Terminating partner with multiple options:</b>
· Source IP Address
· Asserted identity
· Username / Password
SIP Asserted Identity Support
Multiple public IDs per user
Multiple private IDs per user
<b>Media Authorization</b>
· Passes only Allowed codecs
<b>Concurrency Authorization (Concurrent Calls limiting)</b>
· Per User Name
· Per Domain
· Per Tenant

· Combination of above
<b>Prepaid Authorization</b>
· Session time units reservation and re-reservation
Bandwidth Authorization and admission control
<b>Online and Real-time Accounting</b>
· Start, Stop & Interim Accounting
<b>Revenue Assurance</b>
· Writing CDRs to text files if DB is unavailable
· Session Reconstruction on restart to prevent revenue loss
<b>Service Assurance Policy</b>
· Continuing Service if Database is not available
CDR aggregation for the entire core network
Least Cost Routing with 0% revenue loss
Priority based static Routing (Overriding LCR)
QoS Routing
Global Route Plan
Route failover to secondary routes on unavailability
ENUM (toll bypass)
External Routing Server query on SIP (302 Redirect) or native API
PSTN Interconnect Partner Management
<b>Technical-Prefix Management</b>
· Removal on Originator Side
· Insertion on Terminator Side
PSTN Interconnect partner capacity enforcement
PSTN interconnect partner Media codec filtering and adaptation
Packet loss, delay, ACD and ASR reporting per Route
SIP Trunking Application with complete DID management
<b>Distributed Signaling and media handling</b>

· Separate scalability for signaling and media
High Availability and Automatic IP Takeover
Customer & Order Management
Provisioning API
COTS based deployment
Available with both Oracle and MySQL Databases
Available on both Linux and Windows
Software only version available
Management GUI
Inter-Connect Billing & Settlement (optional Add-On through Partner)