

10K Proxy Calls  
in Single Server

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Switch Integrated  
with Real Time Billing

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Wholesale SMS  
& Mobile Top Up

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Rate Plan  
Normalization

---

Most Advanced Fraud  
Detection System  
in the Industry

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Absolute Prepaid  
with Traditional  
Postpaid Platform

---

WebRTC to SIP  
Conversion

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Great Price  
Quality Ratio



# REVE SBC

**Session Border Controller**  
& Beyond

REVE Systems

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## CORE FEATURES

Dynamic Scalability

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1+1 Hot Standby

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Real Time Performance Monitoring

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Distributed Control & Media Architecture

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Industry Standard all Routing Tools

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Local Number Portability (LNP)

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Multiple Protocol Supported

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Media Transcoding

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Integration with Cloud Management Solutions

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Topology Hiding

# NEXTGEN FEATURES



## RATE PLAN NORMALIZATION

- Conversion of any termination client's rate plan format to native format
- Easy uploading of rate plans and conversion into respective templates
- Auto conversion of all templates into native rate plan format

## NEVER GO NEGATIVE

- Restricts users account balance from going negative
- Real-time monitoring of running calls to check low or zero user balance
- Automatic call drop before user account balance turns negative



## WEBRTC SIP GATEWAY

- Complete inter compatibility between WebRTC and SIP Gateway
- Enables users to initiate & receive VoIP calls over WebRTC without any plugins
- Click-to-call, video call, video conferencing, webchat, screen sharing, & file transfer supported

## CALL & ROUTE STIMULATOR

- Route checking facility for selected clients & the dialed destination
- Routing sequence & its status checking facility
- Data display based on current capacity & route status
- Call from any specific carrier of any level to check rate, route & balance issue



## INSTANT WHOLESALE

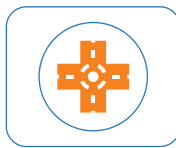
- Instant online signup for carriers
- Instant route selling and buying on a single platform
- Online payment & balance withdraw facility
- All types of reporting in each panel

# MAJOR FUNCTIONALITIES



## GROUP ROUTING

- Different route setting under a single route group
  - Easy assigning of specific group to clients with similar preferences
  - Minimum and Maximum digits for each destination can be set
  - Saves enormous time & hassle of assigning routes to clients individually & repeatedly
- 



## ADVANCED ROUTING

- Source & Destination based Routing
  - Loss Less Routing (LLR) & Least Cost Routing (LCR)
  - Percentage (%) Based Routing
  - Quality Based (ACD/ASR/PDD) Routing & Quality Based LCR Routing
  - Time Based Routing
  - LRN and MNP dip based Routing
  - Overflow & Route Capacity based Routing
  - Specific Prefix based Rate plan & Route Tagging to maximize Profit
- 



## CLI MODIFICATION

- Dial Number Translation
  - Caller ID Modification
  - Caller ID Allow/Block
  - Dialed Number Length Verification & Blocking
- 



## CLIENT MANAGEMENT

- Supports 3 types of clients (Originating, Terminating and Both)
- Manages CPS for Originating & Terminating client individually
- Supports both Prepaid and Postpaid Payment
- Add & Strip Prefix to adjust termination call
- Client authentication by IP & Prefix

# MAJOR FUNCTIONALITIES



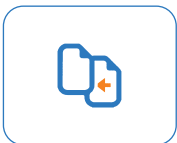
## RATE PLAN MANAGEMENT

- Prefix wise multiple rate plan
  - Supports Peak & Off-Peak based rate management
  - Easy modification of rate plan by changing (% value) in the existing plan
  - Future date wise scheduled rate management
  - Destination wise TAX activation
  - Fast upload & easy to download rate plan in CSV file format
- 



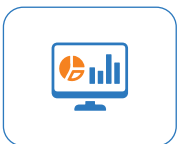
## LCR

- Base rate plan can be managed
  - Multiple offers can be managed (gold, silver, bronze, etc.)
  - Rate Analysis of multiple termination carrier
  - Create offer rate for Originating carrier
  - Compare carrier rate with offer date (rate increase, decrease & no change view facility)
  - Direct mail to carrier group
- 



## RECONCILIATION MODULE

- Admin can select time slot for doing this operation
  - Can implement on all/individual client
  - Flexibility to choose current rate plan or new rate plan to re-rate CDR
  - Reconciliation will be done only for the changed rate/s of calling destination, not for all CDR
- 



## USER BEHAVIOR BASED REPORTING

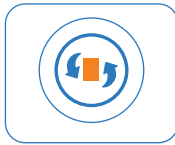
- Shortcut links suggestion for user in the login page based on user behavior
- Multiple time selection of monitoring report options

# MAJOR FUNCTIONALITIES



## ANALYSIS & REPORTING

- Dashboard monitoring
  - Real time Report on active call, live call logs & SIP Log trace
  - Custom Report generation based on user's demand
  - Detailed report (Successful, Failed & Authentication Failed)
  - Summary report (Hourly, Daily, Monthly) Specific Search (Callee & Called Number, Duration based, Disconnect Cause Code)
  - Gateway wise ACD/ASR/PDD wise report
  - Comprehensive Monitoring reports as graphs (Time wise, Client Wise, Hourly, Daily & Monthly)
- 



## NET-OFF/BILATERAL ACCOUNT MANAGEMENT

- Summary report generation to check & compare call amount, recharge amount, profit & remaining balance
- 



## REPROCESS CDR

- Admin can Re-Rate CDR based on Current or New Rate Plan during a defined Time Slot
  - All clients or specific clients can be selected
  - Reprocessing applies for the changed rate of calling destination, not for all CDR
- 



## INVOICE MANAGEMENT

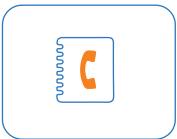
- Supports Auto & Manual Invoicing with Client-to-Client Invoice Customization
- Invoice generation in both CSV and PDF format
- Notification of invoice via both Mail & SMS
- Invoice Configuration:
  - Daily or Weekly or Monthly | Specific Date & time Zone Wise | Due Date Management
- Single Invoice facility for multiple services (Voice, SMS etc.)
- Payment Posting facility and tagging against each Invoice

# ADDITIONAL FEATURES



## SALES PERSON WISE ACCOUNT MANAGEMENT

- Sales person wise individual reports generation to check no. of handled clients, profit/loss status, call volume and more



## ACTIVITY LOG

- Highest security level for checking billing modifications for modules like Client Add/Delete, Rate Plan Add/Delete, Rate Change Information etc.
- Facility to track billing activities by selecting specific date, time & user worked at which time from which login IP etc.



## REAL-TIME BILLING

- Mid-Call Re-AUTHORIZATION after every set time interval for True Prepay.
- Safe Amount/Percentage Margin/Credit Limit based Call Snapping
- Pre-pay & Post-pay Billing
- Real-time CDR Processing
- Multi-Currency Support
- Blocking/Unblocking of Destinations
- Online Payment Gateway Integration
- Periodic & Instant Invoice Generation in PDF & Excel Format
- Customized Billing Cycle



## ONLINE & BANK PAYMENT SUPPORT

- Supports Online Payment Gateway & Debit/Credit Card
- Currency Conversion and Balance adjustment
- Clients can make payments at Bank & upload information in System for the admin



## WHOLESALE SMS

- Easy SMS Rate management
- Supports HTTP and SMPP Gateway
- Easy Route Management
- User friendly detailed & summary report
  - Failed, Successful & Pending report
  - Group Report by SMS type, Sender, Receiver, Country
- Profit Loss Analysis and Invoice Management



## WHOLESALE MOBILE TOP UP

- Supports easy and separate rate plan management
- Supports currency wise conversation rate management
- Standard API for connectivity with originating IP client
- Supports all standard international MTU gateway for termination (Transfer to, Mobi kwik, Ezee top, Recharge now, Pay point, Cellcom, Topup24, REVE Gateway etc.)
- Provides detailed monitoring report, failed cause analysis, profit loss management & invoice generation

# FRAUD & SECURITY MANAGEMENT

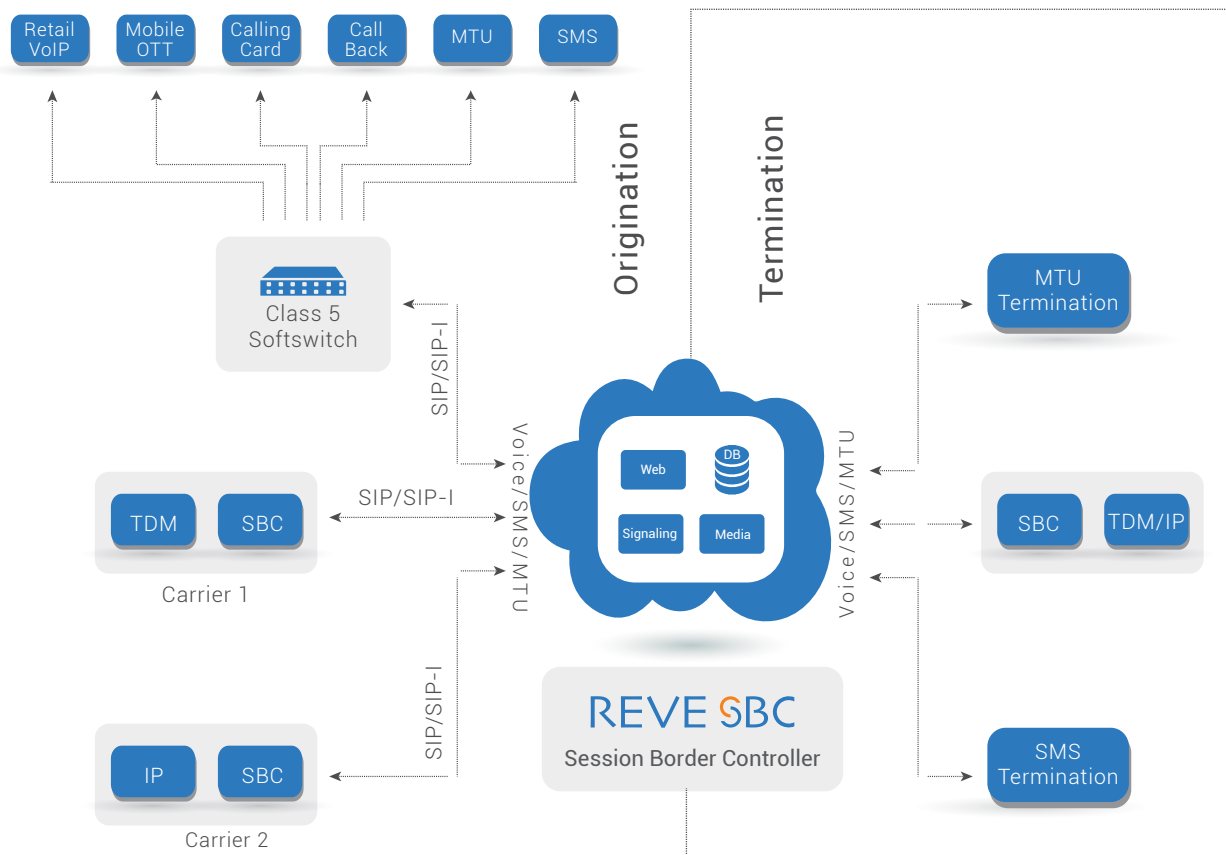
## MULTILAYER SECURITY

- FAS Detection
- Media Analytical Ability  
(No Media, One way media & delayed Media)
- Premium Routes Call Detection and Ability to take Actions
- After Business Hour Call Fraud Detection
- Robocallers Detection
- 2FA for Login, Recharge and IP Client Addition
- IP Based Firewall in switch for call authentication
- Encrypted password for database
- Role based access control
- Auto expire (After 1st use, after 30 Days & Configurable)
- Billing activity log trace
- DoS/DDOS attack blocking at H/W

## INTELLIGENT ALERT SYSTEM

- System alert for unusual disk, CPU, memory usage & route down
- Performance alert for unusual ASR, ACD & Average PDD
- Each Route wise separate alert for unusual ASR, ACD & average PDD
- Behavioral alert for unusual no. of calls and termination gateway down
- Alert for unwanted recharge, low balance and unauthorized user access
- Performance alert for unusual ASR, ACD & Average PDD
- Each Client wise separate alert for unusual ASR, ACD & average PDD
- Behavioral alert for unusual no. of calls
- Alert for unwanted recharge & unauthorized user access

## SOLUTION ARCHITECTURE



# TECHNICAL SPECIFICATIONS

## SUPPORTED PROTOCOLS & SESSION CONTROL

- SIP v.2.0 (RFC 3261, RFC 4566), SIP-I
- SMPP v3.4 protocol for SMS and HTTP
- SIP REDIRECT
- RADIUS
- RFC 3863, 3428, 3903, 3515 and new RFC
- Caller-Carrier PTIME isolation
- Media Monitor
- RAW IPDRs / Rated CDRs posted to Mediation Server / Local Memory
- SIP Header Manipulation/Topology Hiding
- Error Code Adaptation
- Support for Proxy and Non Proxy

## SYSTEM ARCHITECTURE

- 1+1 Hot Standby
- Supports distributed Architecture for Robust deployment
- Real time data backup
- Web Server: Jakarta, Apache Tomcat
- Database: Oracle, MySQL, PostgreSQL & MS-SQL

## TONES & MEDIA FUNCTIONS

- All standard Codec in Transparent Mode: G.711, G.723.1, G.726, G.729a, G.729b, G.729ab, iLBC, G.722, AMR-NB, AMRWB, GSM Codec Support etc.
- Codec Transcoding based on Voice Codec (OPUS,G711,G729)
- Auto In band / Out band DTMF over IP (INFO, RFC 2833)
- Media: RTP, RTCP
- T.38 Fax Relay Protocol

## WEBRTC FUNCTIONALITY

- Compatible with any client that complies with WebRTC standards.
- SIP over Secure WebSocks
- ICE/STUN
- SIP Internetworking

## INSTALLATION PLATFORMS

- Supports Unix/Linux Based Platform

## SYSTEM PERFORMANCE TEST

### Server Specifications

CPU (s)	: 6 Cores (12 core by hyper thread)
Processor Model	: Intel(R) Xeon(R) CPU E5-2430 0 @ 2.20GHz
Cache Size	: 262144KB
Total Memory	: 32 GB (DDR3, Speed: 1600 MHz)
HDD	: 4 X 500 GB (RADID 5, 7.2 K RPM SATA)
NIC Card Speed	: 2 x 1000 Mb/s

### Result

Concurrent Call Capacity
• Proxy Mode : 10,000
• Non-Proxy Mode: 20,000
• Transcoding Mode: 6,000
• CPS Value: 2,000
• BHCA: 72,00,000

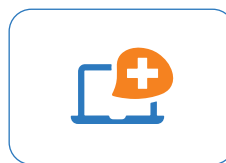
## ADDITIONAL SERVICES



### LOCAL NUMBER PORTABILITY (LNP)/(LRN)

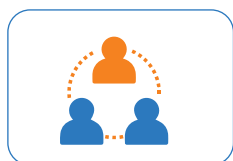
Facilitates to change service provider without changing the phone number. A centralized database keeps records of all service providers with phone number.

- Easy to manage destination wise routing
- Portability number based rate management
- Detailed reporting
- Connectivity with portability database



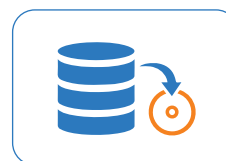
### SUPPORT PORTAL WITH TROUBLE TICKET

- Manages support history (Admin, Agent, Supervisor)
- Role based access control
- Detailed reporting on closed and live ticket with various status
- Agent performance management reporting
- Carrier/vendor can also keep a track of their support requests



### CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

- Customer contact information management identify, add and categorize new leads easily & quickly
- Improved business relationship with customers & partners
- Offer better & personalized customer service to differentiate from competitors
- Improved product, service and profitability



### DATA BACKUP

- Real time data backup from both main & replication server on a schedule basis
- Complete backup of main database and CDR backup of successful calls which can be downloaded
- Data backup in case of Hard drive crash, theft, accidental deletion, malware attack or any kind of natural calamities
- Immediate email notification in case of any urgency



### SWITCH PARTITION

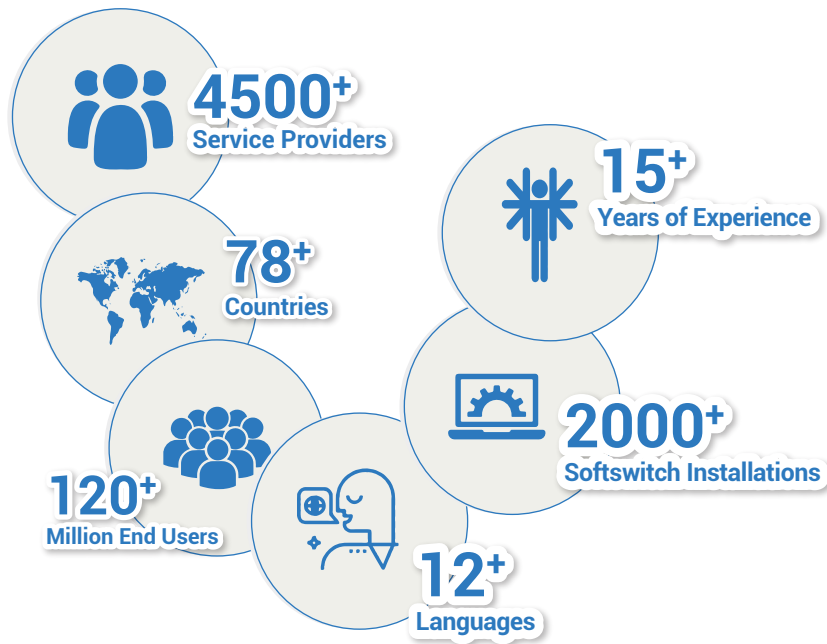
- Administrator can do switch partition, which makes every partitioned switch a completely new switch.
- With every partition, the call volume of the admin switch decreases and the volume will be assigned to child partitioned switch.



### CAMPAIGN MANAGEMENT SYSTEM

- SMS and Email Campaign
- Newsletter Campaign
- Survey Campaign
- Audience engagement & creating brand awareness
- Report generation and tracking

# KEY STATISTICS



# NOTABLE CLIENTS

 <b>Airtel</b> (India)	 <b>CountryCom</b> (Russia)	 <b>Anwarnet</b> (Algeria)	 <b>Babilon-Mobile</b> (Tajikistan)	 <b>Bright Telecom LLC</b> (USA)	 <b>DollarPhone</b> (USA/Canada)
 <b>IDT Telecom</b> (USA)	 <b>Tigo</b> (Venezuela)	 <b>Telecom Oman</b> (Oman)	 <b>ICT</b> (Bangladesh)	 <b>21CTL</b> (UK)	 <b>TELEPORT</b> Azerbaijan

And More...

# RECOGNITION



Recognized Leader in Mobile VoIP Solutions and Best Softswitch & Billing Solutions Provider



REVE Systems wins Recognized Leader in Best Softswitch & Billing Solutions Provider



REVE Systems wins Red Herring's Top 100 Global Award



iTel Switch receives NGN Leadership Award for being a Global Technology Leader



Unified Communications Excellence Award for Outstanding Innovation

## ABOUT REVE SYSTEMS

A RED Herring's 2012 Top 100 Global Winner, REVE Systems is a prominent leader in IP based Communication solutions established in the year 2003 with a focused approach to serve the communication industry. As a Telecommunication & Software Solution provider, REVE Systems holds a leadership position in Enterprise Communication, Data & Telecom Billing, Automation, Information Security (Antivirus, 2FA), Live Chat, Deep Packet Inspection (DPI), Secure Printing and Softswitch with Integrated Billing & Bandwidth Optimization solutions.

### Other Products

REVE Chat 

iTel Swiitch 

WebRTC 

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secure

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 telbilling  
Carrier grade billing system

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