

vSMSC PLATFORM

A high-performance least cost routing virtual SMSC platform that delivers superior global mobile messaging and customer management

WHAT IS A vSMSC

The Panacea Mobile vSMSC Platform is an enterprise grade SMSC system that is used by WASPS, Banks, Enterprises, and Aggregators around the world to deliver global least cost SMS routing solutions. The key feature of the vSMSC Platform is its flexible routing capabilities, allowing for both Least Cost & Priority Routing.

Built on a Kannel foundation, with extensive performance enhancements, the vSMSC is capable of processing more than 1000 messages per second, and is designed to handle tailored message routing, priorities, billing and reporting for over 50 million messages across multiple customer accounts in a single day. The powerful and robust SMSC architecture has an extensive range of features for message routing, system management, customer accounts and reporting built in that extend far beyond any comparable SMSC solution.

SUMMARY OF FEATURES



Messaging

- High-speed batch processor
- Least cost routing
- Priority routing
- Routing filters
- Two way message tagging
- Short Code management



System

- Highly optimised Kannel
- Access Control (User Permissions)
- User Audit Logs
- Network, country and currency agnostic
- Billing Management
- Extensive performance optimisations
- Real-time database replication
- DRBD file replication



Reporting

- Activity Overview
- Report Builder
- Payment Reports
- Service monitoring
- Queue monitoring
- Gateway monitoring



Customer Accounts

- Full customer interface
- Billing Management
- SMPP & HTTP APIs
- Global currency management
- E-commerce enabled



Additional Components Online Billing Services

TECHNICAL OVERVIEW

DATABASE SYSTEM

The Platform described has been designed to run on a MySQL 4.1 or higher database system. It takes advantage of the binary logging features, InnoDB data space and various other capabilities of MySQL to ensure maximum performance and stability. The Platform uses table and data partitioning strategies to ensure large data sets do not compromise the speed of the system.

SUPPORTED OPERATING SYSTEMS

The system runs on any POSIX.1 compliant Platform. These include FreeBSD, Linux, Solaris, Mac OS X and others. We do however recommend using RedHat Enterprise Linux and/or CentOS distributions due to their increased stability.

OPEN SOURCE COMPONENTS

The core Platform itself is a heavily customised version of Kannel, which makes use of a number of open source libraries such as MySQL, LibXML and OpenSSL. We are fully compliant with the licensing of Kannel even though many of our competitors choose to ignore it.

SMPP v3.4 COMPONENT LICENSING

The Platform provides a fully functional SMPP v3.4 client offering the option to integrate external business applications and solutions into the system.

ROUTING ENGINE

Least Cost & Priority Routing



The key feature of the vSMSC Platform is its flexible routing capabilities. Multiple SMSCs can be added to the platform and least cost routing profiles can be configured to take advantage of the least cost for each network across all SMSCs. Message traffic is load balanced across multiple binds for an SMSC and can be prioritized to

enable time-sensitive traffic (e.g. one time pins) to bypass large bulk messaging queues allowing quality of service to be maintained across customer accounts.

Inbound Routing



In addition to the outbound routing features the vSMSC Platform has extremely powerful inbound (MO) routing. Numbers or number ranges can be configured per gateway (operator/SMSC) and then these can be delegated to a particular user for delivery either via SMPP or HTTP.

Numbers can also be shared amongst many users, but differentiated by keywords. As messages are received with a matching keyword attached, these will then be routed to the correct user as before. Inbound (MO) messages can also be billed if desired.

USER MANAGEMENT

Customer Account Management

Extensive customer account configurations are available including currency, country, default prefixes, allowed protocols (HTTP & SMPP), throughput and overdraft facilities. Routing profiles and filters can then be applied to customer accounts to control network level traffic routing, network pricing, traffic priority and more. Billing management tools and reporting make managing hundreds of global customers significantly easier. All of these tools allow for flexible account configurations to be applied to each customer account.

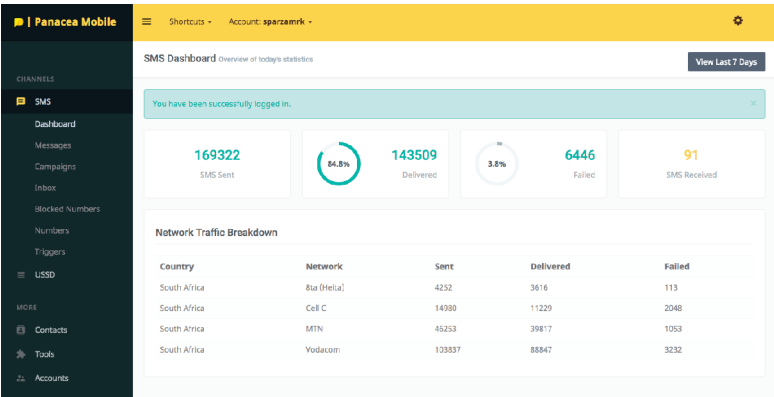
User Access Control

System users who have access to the vSMSC back end can have limited access enabled to prevent them from changing or viewing sensitive areas of the vSMSC system. This is done by creating 'system roles' that have granular permissions throughout the system and then applying the roles to the system user accounts. Permissions can be allowed on specific customer accounts only, if desired, and applying multiple system roles to a backend system user can allow for a highly tailored level of access for different

operational, development, customer service, routing, support and finance department system users.

User Audit Logging

The vSMSC logs all system user actions and changes made to the system. This allows for transparent accountability for any operational issues that may arise. Audit logs can be searched by date and user.

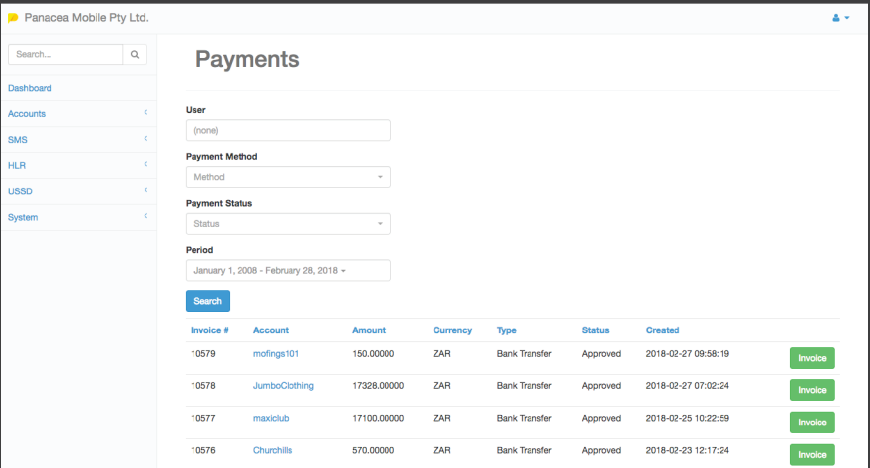





BILLING MANAGEMENT

The vSMSC Platform has a tightly integrated billing system, managing all processes within the gateway. Accounts can be set to allow an overdraft or work on a strictly prepaid basis. The billing process can be used for management of e-commerce transactions or internal budget allocation across multiple departments.

Billing points which can be set:

- Pre/post paid billing on outbound (MT) messages, defined per destination, per operator.
 - Post paid billing on inbound (MO) messages, defined per number, per operator.
 - Post paid billing on inbound (MO) numbers, which can be billed per day, week, month, quarter or year.
 - For users to deposit funds into their accounts, there are some pre-built modules available, such as: Bank Transfer (manual approval) PayPal
- These can be approved via the administration console, or transactions can be manually added to user accounts.



Contact Details
 0860 105 774 or
 +27 (0) 10 442 3100
 sales@panaceamobile.com