

## Selenium SMS

The *programmable* text messaging server

### Key features

- Send and/or receive text messages
- Individual messaging or bulk “broadcast style” messaging
- Connect to other I.T. applications, to your email system or use direct from your desktop PCs
- Desktop messaging console, Selenium MC, included free of charge
- Operational information and functions provided by Selenium CP
- Supports the industry standard communications protocol SMPP so you’re not locked into a single service provider
- Accounts and accounting facilities
- Automatic or application controlled routing of messages
- Binary messages supported (e.g. for ring tones)
- International character sets supported
- Long messages supported through message concatenation
- “Express messaging” facility for high priority messages
- Event logging for billing and general audit purposes
- Access control facilities
- Alert Manager keeps system administrators aware of run-time issues
- Comprehensive statistics maintained
- Automatic load balancing across network connections
- Automatic recovery from database and network failures
- High Performance Mode allows “fire and forget” messaging for highest levels of throughput
- Capable of very high rates of message throughput in any mode and highly scalable

### Technical Highlights

- Selenium SMS is a platform independent Java application which runs on Windows or Unix

## SELENIUM SMS

### Communicate with people who just won’t stay in one place

Text messaging (also known as “SMS”) has become a phenomena of the 21<sup>st</sup> Century. Use by all manner of people has exploded, and we continue to see growth each month.

But business usage is in reality, still in its infancy, and the value of a text messaging business communications system sitting alongside the company email server, is something which only some companies have recognised so far.

### Selenium SMS

Selenium SMS is just like an email server, but its job is to allow you to send and receive SMS text messages rather than emails. You can send messages from your desktop, from another I.T. system or using email itself. It really couldn’t be easier.

### Business Benefits

- *Affordable, mobile communications to staff.* No need to issue them with expensive, specialised equipment. All they need is the standard mobile phone which they almost certainly already have.
- *Auditable.* It’s possible to use Selenium SMS in a way which renders your mobile communications auditable. This is difficult to achieve with standard voice calls.
- *Reach a large audience easily.* Selenium SMS can handle truly huge volumes and can operate at very high performance levels. Broadcast key marketing messages to customers and prospects.
- *Familiar technology.* Telecommunications systems use all manner of technologies, unfamiliar to most I.T. practitioners. Selenium SMS takes care of the complexity of interacting with the world of telecommunications, leaving you to get on with your business.

### Selenium MC – The Message Console

To allow you to get started immediately, without any need to integrate Selenium SMS with any other I.T. systems, Selenium SMS comes bundled with Selenium MC, the Message Console application, at no extra cost. Modelled on a typical email program, Selenium MC lets you use your web browser to send and receive text messages. The system is familiar and easy to use, with an Inbox, Outbox, Send Message(s) function and a User Administration function where you can set up user accounts. Users can be allowed to send an unlimited number of messages or they can be granted a quota, a maximum number of messages they can send per hour, day, week or month. Long (concatenated) messages are automatically handled, as are all manner of character sets including Arabic and other multi-byte sets.

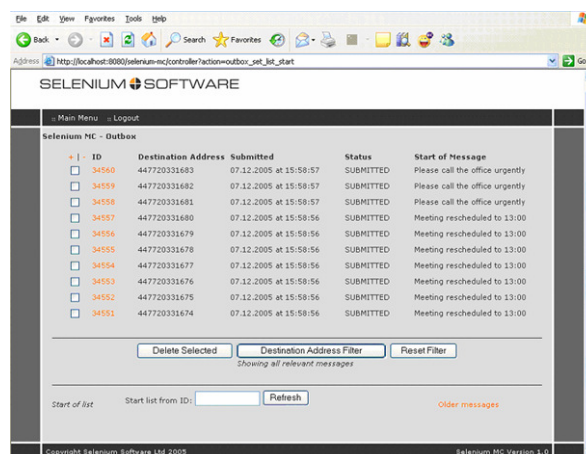


Figure 1 - The Selenium MC Outbox

<sup>1</sup> SMPP application connectivity requires a licence for the separate product, Selenium SMPP Access.

environments (including Linux)

- You can program your own extension logic using javascript. This allows custom validation, data manipulation and advanced routing to be accomplished.
- Databases supported include MySQL (4.0, 4.1 and 5.0) and Oracle (9.2 and 10.2)
- Interaction with Short Message Service Centres (SMSCs) and SMS Gateways can be via the industry standard SMPP protocol, via a configurable HTTP interface or (with the Esendex network) the Esendex SOAP interface
- You can develop and “plug in” your own SMSC connectors using the SMSC Connector Framework.
- Integration with email systems is possible utilising the standard POP3 protocol
- Integration with applications can be achieved using Selenium SMS API via a database, HTTP, email (POP3) or SMPP<sup>1</sup>.
- Routing of MT messages, MO messages and delivery receipts can be automated using regular expression based rules and complex rules can be implemented as CLC scripts (See Custom Logic Containers).
- Scalable to n-node architecture for very high throughput capacity

## Selenium CP – The Control Panel

Monitoring the state of your Selenium SMS text messaging server and being able to exercise operational control over it while it is running is provided for by Selenium CP, the Selenium SMS Control Panel. This standard component of the system provides comprehensive information and a range of useful facilities to help you get the best out of your server.

SELENIUM SOFTWARE

:: Refresh		:: Shutdown		:: Logout	
<b>System Status</b>		Thu 7 Dec 2006 12:53:46		<b>Run Mode: TRACKABLE</b>	
System started at	864	System up-time	0 days, 0 hours, 2 minutes		
Messages Sent OK	0	Messages Sent ERR	0		
Receipts Received OK	0	Messages Received ERR	0		
Receipts Received OK	0	Receipts Received ERR	0		
Last SEVERE Event					
Last WARNING Event					
<b>SMS Connectors</b>		<b>Status / Action</b>		<b>Information</b>	
SMS Provider 1 RX		Go off-line		Thu 7 Dec 2006 12:56:24	
SMS Provider 1 TX		Go off-line		Thu 7 Dec 2006 12:56:24	
SMS Provider 2 TX		Go off-line		Thu 7 Dec 2006 12:56:05	
<b>MT Content Connectors</b>					
JDBC/CHEAP		Go off-line		Thu 7 Dec 2006 12:56:24 / 100 / 1400	
JDBC/INTERNATIONAL		Go off-line		Thu 7 Dec 2006 12:56:23 / 0 / 0	
JDBC/AUTO		Go off-line		Thu 7 Dec 2006 12:56:23 / 0 / 0	
HTTP/CHEAP		Go off-line		Thu 7 Dec 2006 12:54:04 / 0 / 0	
HTTP/INTERNATIONAL		Go off-line		Thu 7 Dec 2006 12:54:04 / 0 / 0	
SMPP/CHEAP		Go off-line		Thu 7 Dec 2006 12:54:04 / 0 / 0	
SMPP/INTERNATIONAL		Go off-line		Thu 7 Dec 2006 12:54:04 / 0 / 0	
<b>Outbound Queues</b>					
CHEAP				Current Size: 464 / Peak Size: 500	
INTERNATIONAL				Current Size: 0 / Peak Size: 0	
<b>Services</b>					
<b>TX Dispatchers</b>					
SMS Provider 1 TX				Rate: 7 per sec / OK: 864 / ERR: 0	
SMS Provider 2 TX				Rate: 0 per sec / OK: 0 / ERR: 0	
<b>Requeue Services</b>					
JDBC/CHEAP				The Requeue Service is not enabled	
JDBC/INTERNATIONAL				The Requeue Service is not enabled	
JDBC/AUTO				The Requeue Service is not enabled	
HTTP/CHEAP				The Requeue Service is not enabled	
HTTP/INTERNATIONAL				The Requeue Service is not enabled	
SMPP/CHEAP				The Requeue Service is not enabled	
SMPP/INTERNATIONAL				The Requeue Service is not enabled	
<b>RX Receivers</b>					
SMS Provider 1 RX				OK: 0 / ERR: 0	
<b>Keep Alives</b>					
SMS Provider 1 RX				7	
SMS Provider 1 TX				0	
SMS Provider 2 TX				6	
<b>Miscellaneous</b>					
Statistics Snapshots		Write statistics now			
SMPP Trace		Set trace ON			
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If Selenium SMS lacks a feature that you require, contact us at [seleniuminfo@seleniumsoftware.com](mailto:seleniuminfo@seleniumsoftware.com) to discuss. We'd be only too happy to improve the product and meet your requirements.

<sup>2</sup> Most but not all phones support concatenated messages

:: Refresh                      :: Shutdown                      :: Logout

**System Status**  
 System started at                      Wed 18 Jan 2006 15:33:14  
 Messages Sent OK                      0  
 Messages Received OK                      5  
 Receipts Received OK                      0  
 Last SEVERE Event  
 Last WARNING Event

**Run Mode: TRACKABLE**  
 System up-time                      0 days, 0 hours, 0 minutes  
 Messages Sent ERR                      0  
 Messages Received ERR                      0  
 Receipts Received ERR                      0

SMS Connectors	Status / Action	Information
SMS Provider 1 TX	Go on-line	Wed 18 Jan 2006 15:33:20
SMS Provider 2 TX	Go off-line	Wed 18 Jan 2006 15:33:40
SMS Provider 1 RX	Go on-line	Wed 18 Jan 2006 15:33:44

MT Content Connectors	Status / Action	Information
CHEAP	Go on-line	Wed 18 Jan 2006 15:33:41 / 0 / 0
INTERNATIONAL	Go off-line	Wed 18 Jan 2006 15:33:56 / 0 / 0

**Outbound Queues**  
 CHEAP                      Current Size: 0 / Peak Size: 0  
 INTERNATIONAL                      Current Size: 0 / Peak Size: 0

**Services**  
**TX Dispatchers**  
 SMS Provider 1 TX                      Rate: 0 per sec / OK: 0 / ERR: 0  
 SMS Provider 2 TX                      Rate: 0 per sec / OK: 0 / ERR: 0

**Requeue Services**  
 CHEAP                      The Requeue Service is not enabled  
 INTERNATIONAL                      The Requeue Service is not enabled

**RX Receivers**  
 SMS Provider 1 RX                      OK: 5 / ERR: 0

**Keep Alives**  
 SMS Provider 1 TX                      0  
 SMS Provider 2 TX                      1  
 SMS Provider 1 RX                      0

**Miscellaneous**  
 Statistics Snapshots                      Write statistics now  
 SMPP Debug                      Set debug ON

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**Figure 2 - Selenium CP puts you in control**

### Custom Logic Containers

Selenium SMS allows technical users to program their own custom logic extensions using the popular scripting language Javascript. This allows you to add your own additional message validation rules, to derive new data items, to clone messages and reroute them according to other system conditions. This is an immensely powerful feature.

:: Refresh    :: Control Panel    :: Reload Scripts    :: Logout

Status: Scripts reloaded OK

**Custom Logic Container Scripts**

Name	Type
clcs/clc_submit4.js	SUBMIT
clcs/clc_status_update.js	STATUS UPDA
clcs/clc_deliver_mo.js	DELIVER MO
clcs/clc_deliver_dr.js	DELIVER REC

**clcs/clc\_submit4.js**

```

// Validate and if necessary override the source address
// -----
if (mt.getSource_addr() != "12345") {
  print("Invalid source_addr : changing to 12345 \n");
  mt.setSource_addr("12345");
}

// End of script
  
```

**Figure 3 - Scripting Support**

## SMSC Connector Framework (SCF)

Selenium SMS allows you to develop your own SMSC connectivity components using Java and plug them into your run-time Selenium SMS environment. You still have the option to request new connector types from Selenium Software, but with the SCF you can add the capability you need, in the timeframe you need it in and own the connector code and IPR at the end of the process.

## Send Texts By Email

Selenium SMS' email integration capability means you can use your favourite email product, such as Microsoft Outlook, to send text messages. Imagine being able to forward an email from a customer, direct to the relevant members of your account team for them to read on their standard mobile phones whilst out on the road. And as this scenario implies, you're not limited to short messages which can be no longer than the usual 160 characters in length. Selenium SMS can transmit "long messages" using an advanced network capability called "message concatenation". The result being... that longer than usual messages can be sent to and read on standard mobile phones<sup>2</sup>.

Operational parameters let you control just how long those long messages are allowed to be, so you can exercise cost control too.

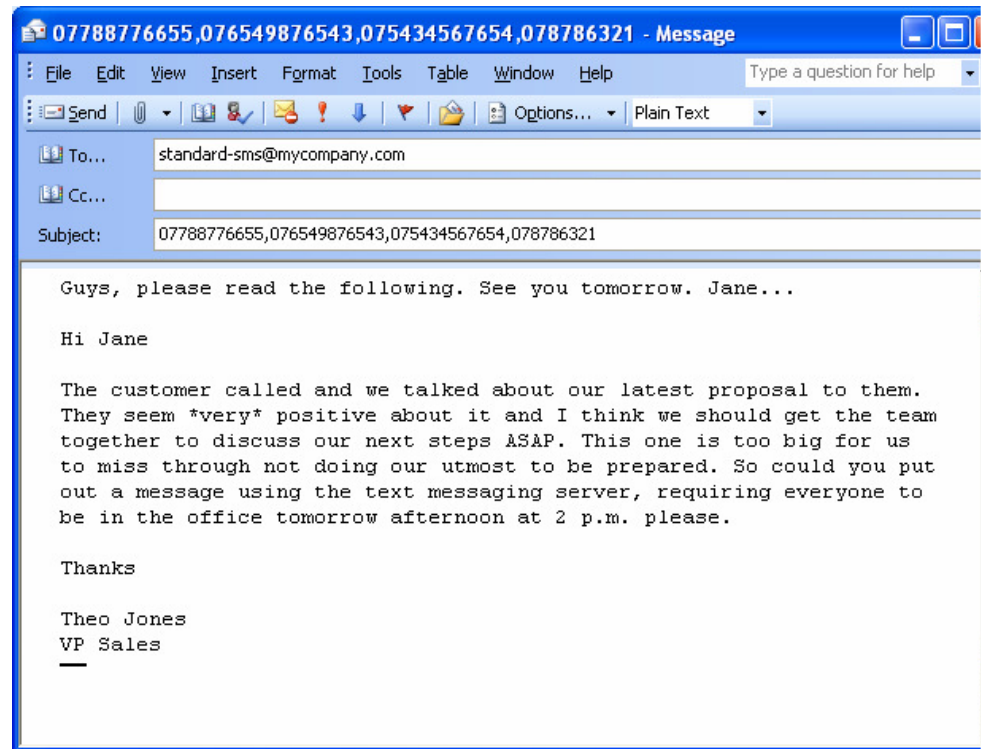


Figure 4 - Sending a text to 4 phones using email

## Email and Access Control

The Selenium SMS email to text service has a built-in *access control* capability, which allows you to control who in your organisation has access to it.

## Text To or From Your Applications

Integration with applications can be achieved in two ways:

1. *Use a database.* Records inserted by your application will be picked up and turned into text messages by Selenium SMS. Messages received from the network by Selenium SMS will be stored in the database for your application to retrieve and process.
2. *Use HTTP.* Selenium SMS has an Application Programmers Interface (API) which can be utilised with HTTP for both sending and receiving messages.

## Accounts and Accounting

You may operate Selenium SMS with "accounts" enabled. If you use the system in this

configuration then users of the system are authenticated (have to prove their identity), may be subject to further authorisation checks and the system may, optionally, maintain accounting data regarding the messaging quota allowance that an account is entitled to. When an accounts quota hits zero, the account is not permitted to send further messages.

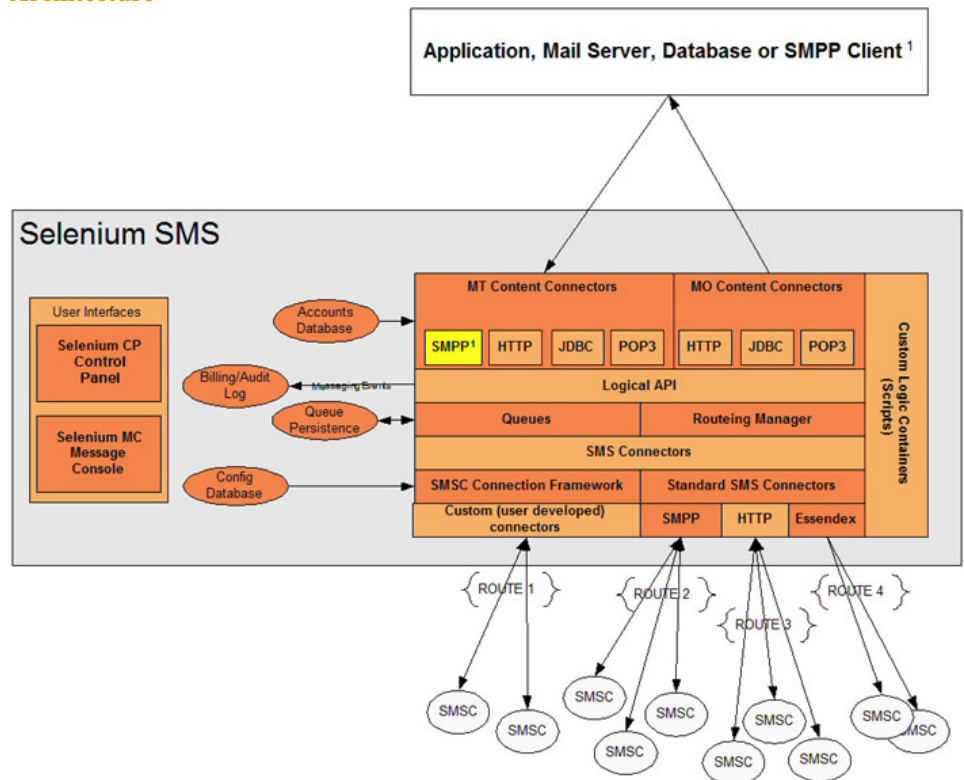
## Billing Support and Audit Trail

If you choose to, you can have Selenium SMS maintain an audit trail of selected messaging operations. Entries in the audit trail show you who is sending or receiving messages and are formatted in such a way that you can import it into other applications for purposes such as internal accounting or billing.

## Statistics

Numbers can be really useful! Selenium CP displays a comprehensive range of statistical information, as shown above. In addition, the Statistics Service writes a snapshot of key run-time statistics to a file periodically, according to a frequency that you specify. The statistics file is also formatted to make it easy to import into other applications such as spreadsheets.

## Architecture



<sup>1</sup> NB: SMPP application connectivity support requires a license for the separate product Selenium SMPP Access, which can run as an embedded module within Selenium SMS. Connecting to SMSCs using SMPP is a standard feature of Selenium SMS.

## Getting Started

To use Selenium SMS, all you need is a licence to use the software, a suitable computer upon which to install the software, a connection to an SMS Service Provider and possibly a database, depending on how you decide to use your text messaging server.

Selenium SMS is a “platform independent” product, which means that it runs on various types of computer, including PCs running Windows as well as Unix or Linux servers.

An SMS Service Provider is comparable to an Internet Service Provider and provides connectivity into the telecommunications network, which is required to transmit your messages.

# SELENIUM SOFTWARE

We can help you get started by finding the SMS Service Provider that is right for you and helping you install and configure Selenium SMS. We can provide training too, if necessary, (though we doubt you'll need it).

## **Price**

A perpetual run-time licence for Selenium SMS starts at just £200. Contact us today to discuss your requirements in full and to obtain a quotation.

## **Contact**

Email: [seleniuminfo@seleniumsoftware.com](mailto:seleniuminfo@seleniumsoftware.com)

Web: <http://www.seleniumsoftware.com>