



System Administrators Manual

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Introduction

Welcome to the SmoothTorque Administrators Manual.

The idea of this manual is to explain to you how all of the parts of SmoothTorque fit together and work.

We'll start off by covering some of the basic concepts in a system so that you understand how they fit together.

We'll then go through how to set up the system so it's configured in a way that suits your needs.

Finally we'll go through and explain how each of the menu options work.

Remember that for task based demonstrations, you can also go to the VentureVoIP website and view the SmoothTorque Tutorial Videos.

We hope that you enjoy using SmoothTorque and that it brings success and profit to your business.

If there is ever anything that you think the software could do better or if you have a problem with a part of it, please get in contact with your reseller for the system, or if you've purchased directly from VentureVoIP (something we're now phasing out), contact us directly.

Obviously if you have any problems getting support from your reseller, VentureVoIP will help you out a provide support for this.

History

In around 2003 Matt Riddell began creating a predictive dialler for Asterisk written in C# on Microsoft Windows. This product was called SineDialer and was released by SineApps.

In around 2006 the usage of SineDialer had grown beyond what was possible in this platform and it was decided that a full rewrite was in order.

Learning from the lessons provided in creating SineDialer we decided to split the software into nodes so that you could grow the system as much as you like.

Because the backend needed to have incredibly good performance, it was decided that ANSI C would be used to create it. While this is a more difficult language for creating software, it does provide significant performance gains over using C#.

So, this new product became SmoothTorque.

While ANSI C is great for writing back ends, it's not so great for creating the front end – you would spend too much time developing for something which needs to be easy to change.

We therefore created the front end in PHP and kept it Open Source for editing.

Concepts

In SmoothTorque there are a few parts that make up the system. We'll go through these here so that you can familiarise yourself with them.

It's really important that you understand these ideas.

First up lets cover the most basic things.

Making Calls

The main purpose of SmoothTorque is to make calls. If these calls are going to be going to telephone numbers, then obviously SmoothTorque will need some way of connecting to those telephone numbers.

So, how does this work?

SmoothTorque can work with either hardware cards (like E1 or T1 ISDN cards) as well as working with VoIP providers (using SIP or IAX2) or external VoIP gateways (such as E1/T1/SS7 to SIP converters).



Campaigns

This term gets mentioned pretty often in the discussion of SmoothTorque and is basically a set of numbers that you want to call and do something with.

A campaign is actually like a container for numbers and settings.

So, let's take an example.

You might have a campaign called “My Campaign”.

You want to be able to make some calls for it so you add in some numbers (more on this later).

When you're ready to run the campaign, you click the play button and it runs.

Phone Numbers

Simple enough, phone numbers are numbers that you want to dial. In SmoothTorque a phone number should be in a format you can dial it without problems.

Note that when you import phone numbers into SmoothTorque it will remove any of the following characters: brackets “()”, spaces, dashes “-” and commas “,”.

Do Not Call (DNC) Numbers

When you are calling lots of numbers you need to remember that you may call someone who doesn't ever want to be called again. It's really important that you respect their wishes, and in some countries failure to do so can result in hefty fines.

SmoothTorque allows you to do a couple of things. First you can import a list of DNC numbers before you start a campaign. SmoothTorque will then remove any numbers from your campaign which are already in the DNC list.

The second thing that SmoothTorque will do, is add people to the DNC list if they press 2 while listening to a message.

When a campaign has finished you can export DNC numbers and send them to a national registry if this is required in your region.

Agents

When we talk about agents, we are normally referring to the people sitting in a call centre (or at home) waiting to take a call.

Not all campaigns use agents, some are just for broadcasting messages or running automated polls.

SmoothTorque runs best with a minimum of 5 agents.

While it can be run with less agents (and we have spent a lot of time working on it to make this possible), it really isn't the optimum solution for a predictive dialler.

If you're looking to run a campaign where you have very low agent numbers (i.e. less than 5), you may be better off using manual dialling to make calls. Manual dialling is an option where an agent logs into the system and simply clicks "Next Number" when they are ready to dial another phone number.

In order for this to work you need to have initialised the campaign for manual dialling, and you need to have created a "customer" with a login type of "agent".

Customers

The SmoothTorque system is like a web site. You need a username and password in order to log in.

Based on the username and password you type in you have a different level of access to various parts of SmoothTorque. Below are the different user types:

- Normal Customer – a user of the system – can create and run their own campaigns
- Agent – someone who will be using the manual dialling system
- Accounts Administrator – someone who processes payments only
- Administrator – someone with full control of the system

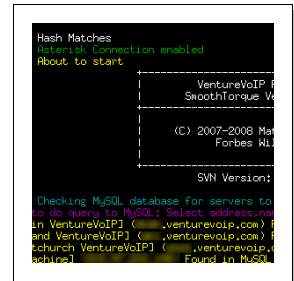
System Layout

A full SmoothTorque system can be considered to be a few components which we've listed here:

SmoothTorque Backend

The SmoothTorque Backend is a program written in C which runs on a Linux server, preferably Debian.

Normally this will be set up for you by either the company you have purchased SmoothTorque from, or by VentureVoIP in some cases.



Database Server

Basically the database server is used to store all of the information for the campaigns as well as statistics on where things are up to. In high load situations you will need to make some optimisations to the database, but the simplest ones can be done through the web interface.



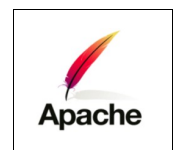
Web Server

In order to provide an interface to the system, SmoothTorque uses the SmoothTorque website.

This is normally displayed using the Apache web server.

Almost all of the website is written using PHP.

The only exceptions are the file upload features which are written in Perl.



Voice Nodes

Voice nodes are servers which are used to make calls. You might have one of these or you might have a lot of them.

The voice nodes run Asterisk™ and are each capable of around 5 calls per second (depending on what you're doing on them).



Funnels

SmoothTorque is built with a system of funnels. This allows it to keep the load (CPU and network requirements) as low as possible.

Funnels are split into two types, database funnels and voice funnels.

Database Funnels

When a piece of software normally wants to send things to a database, it just makes a connection, sends the SQL (database programming language) and runs it.

This is fine for small scale software, but imagine if you wanted to send 400 of these SQL statements every second.

Imaging what would happen if it took 30 seconds for one of them because for some reason the database couldn't keep up. The whole program would have to wait.

Even if it just takes half a second, you've not made 200 phone calls that you should have.

What SmoothTorque does instead is to have a database funnel.

Whenever it wants to send something to the database, instead of connecting and sending it directly, it sends it to the funnel.

The funnel runs in a separate process and stores things that need to go to a MySQL server.

Basically what happens is that the funnel speeds up and slows down it's rate of sending things to the MySQL server based on how many items are waiting in the funnel.

That way, if you're not doing much in the way of calling (i.e. in a smaller system), the requirements from the database server are quite low because it is receiving a slow, regular stream of SQL queries. One of the other benefits of this is that if for example the MySQL server takes 30 seconds to run one query, the rest of the program keeps going, but the database funnel gets more items in it and consequently speeds up enough to get through it's list once things return to normal.

The database funnel also takes care of any situations where a reconnect might be necessary (such as MySQL crashing or connection being lost).

Voice Funnels

You pretty much have the same thing for voice servers.

Again you can't really rely on voice servers to always be working perfectly or accept requests in a timely fashion.

One of the main differences between the voice and database funnels is that the voice funnels contain calls with no particular server in mind.

On the output of the voice funnels you have some software which switches alternately between any voice servers configured and takes care of any reconnections that may be necessary.

One of the benefits of this is that if one voice server has not accepted a command, you can still send calls to the other servers in the interim and won't be too negatively impacted.

Creating a SmoothTorque Platform

In order to create any SmoothTorque platform, you'll need to have some idea of how big it is or how many calls you'll want to be making.

The reason you'll need to do that is so you can decide how you want to install the servers.

In this section we'll run through a few different types of scenarios to help explain how you would set them up.

Small System

You may want to create a small self contained server if you don't need to make many simultaneous calls and have few (if any) agents.

Another reason you may want to have a small system set up is if you would like to have a small test framework for testing any changes you might make to the interface.

In this configuration, you can install all parts on the same machine.

Note: Single Server Not Recommended

This is really not recommended for any reasonable size production system because you are using the same CPU to both serve the user interface and make calls with. If anything in the user interface uses too much CPU (or if you receive too many web hits), your voice quality will be degraded.

Standard System

The normal configuration for a SmoothTorque platform is to have the SmoothTorque backend, the Apache web server, and the MySQL database on one machine, and to have another machine set up as a Voice Node.

So, a standard system installation has two servers in order to separate between voice and data.

Large System (Clustering)

Once you get past the number of channels or calls per second you can run on one Asterisk™ Voice Node you'll want to start clustering machines together.

The basic idea of clustering is that instead of having one server do a task, you get a collection of servers to share the work amongst themselves.

There are numerous benefits to this. Firstly you have redundancy. If something goes wrong with one of your Voice Nodes, SmoothTorque will just share the load amongst the other servers.

The other benefit of clustering is that you are able to reach a much higher capacity than you could with just one server.

When you do this we recommend the following set up (per platform):

- 2-10 x Asterisk™ voice nodes
- 1 x SmoothTorque backend server
- 1 x MySQL database server
- 1 x Apache web server

You can create as many of the above groups as you like and assign various customers to various platform addresses.

The benefit of splitting into blocks of ten voice nodes is that you have a fully redundant system, where if you have a problem in any one set, you can temporarily move customers across to another address until the issue is sorted.

First Looks

From here we're going to assume that you've got the system installed and are able to follow along with the examples we've provided.

If you'd like to set up a system yourself, follow the instructions in Appendix A: Installing SmoothTorque.

Logging In

The first thing you'll see when you connect to any SmoothTorque platform is the login page.

If this is the first time you've used the platform, it will have the default logo displayed on the front page.

This is easy to change, and it is explained in the section “Customising SmoothTorque”.



If this is your first time logging in, you'll need to use a username of “**admin**” and a password of “**adminpass**”.

Select a language and click the Login button.

You'll be presented with a screen which looks something like the image to the right.

User Interface

Across the top you have a row of tabs which turn from grey to blue when you click on them.

Clicking on the will change where you are in the site.

The user interface is basically broken down into a few different areas which I'll explain one at a time.

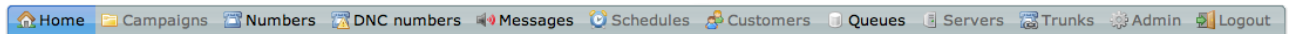


Logo area

At the very top of the page there is a section where the logo for the system is displayed. You can change the logo and the background colour for this area so that it more closely matches your brand.



Menu Bar

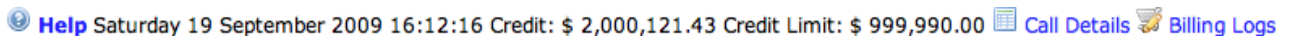


Along the top of every page in the site is the menu bar. In the next chapter we'll explain how each of the links in the menu bar works.

Depending on what type of user you log in as you'll see a different menu bar, only presenting you with options you have access to.

For example, someone who is logging in to a hosted platform does not need to be able to change your servers or trunks, or add or remove any other customers.

Info Bar



Just underneath the menu bar is the info bar.

Again, what this shows will depend on a few things about your user account.

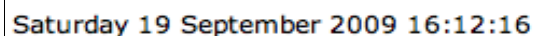
Lets work along from left to right and I'll explain what each part does.

Help Link



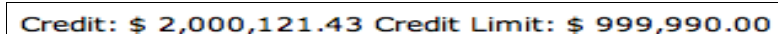
If you click on the help link, you are taken to a short list of instructions explaining how to use the system. When you customise the site with your own settings the help is updated accordingly.

Date and Time



This shows you the local date and time where the system is installed. It can be quite useful to see this if you're working on a system in another country and want to know when to schedule things.

Credit Information



This is displayed along the top under a couple of circumstances:

- You can turned on billing for the system
- The user account you are using has a billing record attached

Call Details



Clicking on the call details button takes you to an entry form where you can select which calls you would like to see in what time period.

If you click on the “select” button next to either the from or two fields, you'll see a pop up calendar where you can select a date.

Once you've selected the “From:” and the “To” fields and submitted the form, you'll be taken to a page which shows you the call records for the time period in question.

Please select the dates you would like to view:

From: select

To: select

Su Mo Tu We Th Fr Sa

1 2 3 4 5

6 7 8 9 10 11 12

13 14 15 16 17 18 19

20 21 22 23 24 25 26

27 28 29 30

this month close

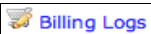
SmoothTorque
VentureVoIP

Home Campaigns Numbers DNC numbers Messages Schedules Customers Queues Servers Trunks Admin Logout

Help Saturday 19 September 2009 16:32:07 Credit: \$ 2,000,121.43 Credit Limit: \$ 999,990.00 Call Details Billing Logs

Call Date/Time	Duration	Billsec	Disposition	AccountCode	Phone Number	Result	Per Minute	Lead	Connected	Press1	Total	Charged
2009-09-16 13:59:47	1022	1003	ANSWERED	sti-matt	0212742112	pressed 1	\$ 1.75.52	\$ 0.25	\$ 1.53	\$ 20	\$ 197.3	✓
2009-09-16 13:58:11	34	25	ANSWERED	sti-matt	0274324238	human	\$ 4.38	\$ 0.25	\$ 1.53	\$ 0	\$ 6.16	✓
2009-09-16 13:57:18	91	73	ANSWERED	sti-matt	0212742112	pressed 1	\$ 12.77	\$ 0.25	\$ 1.53	\$ 20	\$ 34.55	✓
2009-09-16 13:57:08	39	29	ANSWERED	sti-matt	0274324238	human	\$ 5.07	\$ 0.25	\$ 1.53	\$ 0	\$ 6.85	✓
2009-09-15 15:32:10	21	15	ANSWERED	sti-matt	034742030	s	\$ 2.63	\$ 0.25	\$ 1.53	\$ 0	\$ 4.41	✓
2009-09-15 15:31:30	112	45	ANSWERED	sti-matt	034742363	pressed 1	\$ 7.87	\$ 0.25	\$ 1.53	\$ 20	\$ 29.65	✓
2009-09-15 15:31:10	26	9	ANSWERED	sti-matt	034742415	s	\$ 1.75	\$ 0.25	\$ 1.53	\$ 0	\$ 3.53	✓
2009-09-15 15:30:30	62	60	ANSWERED	sti-matt	034742298	answer machine	\$ 10.5	\$ 0.25	\$ 1.53	\$ 0	\$ 12.28	✓
2009-09-15 15:29:50	67	63	ANSWERED	sti-matt	034742095	answer machine	\$ 11.02	\$ 0.25	\$ 1.53	\$ 0	\$ 12.8	✓
2009-09-15 15:28:50	28	26	ANSWERED	sti-matt	034742142	s	\$ 4.55	\$ 0.25	\$ 1.53	\$ 0	\$ 6.33	✓
2009-09-15 15:27:09	43	19	ANSWERED	sti-matt	034742362	s	\$ 3.33	\$ 0.25	\$ 1.53	\$ 0	\$ 5.11	✓
2009-09-15 15:23:49	84	61	ANSWERED	sti-matt	034742384	human	\$ 10.68	\$ 0.25	\$ 1.53	\$ 0	\$ 12.46	✓
2009-09-15 15:23:29	84	60	ANSWERED	sti-matt	034742022	answer machine	\$ 10.5	\$ 0.25	\$ 1.53	\$ 0	\$ 12.28	✓
2009-09-15 15:23:09	65	62	ANSWERED	sti-matt	034742015	human	\$ 10.85	\$ 0.25	\$ 1.53	\$ 0	\$ 12.63	✓
2009-09-15 15:21:29	28	5	ANSWERED	sti-matt	034742388	s	\$ 1.75	\$ 0.25	\$ 1.53	\$ 0	\$ 3.53	✓
2009-09-15 15:20:49	14	9	ANSWERED	sti-matt	034742283	s	\$ 1.75	\$ 0.25	\$ 1.53	\$ 0	\$ 3.53	✓
2009-09-15 15:20:09	25	22	ANSWERED	sti-matt	034742144	s	\$ 3.85	\$ 0.25	\$ 1.53	\$ 0	\$ 5.63	✓
2009-09-15 15:19:49	53	28	ANSWERED	sti-matt	034742213	s	\$ 4.9	\$ 0.25	\$ 1.53	\$ 0	\$ 6.68	✓
2009-09-15 15:19:29	72	68	ANSWERED	sti-matt	034742121	answer machine	\$ 11.9	\$ 0.25	\$ 1.53	\$ 0	\$ 13.68	✓

Billing Logs



If you click the Billing Logs link, it will take you another page where you can select the “From” and “To” dates for the time period you're interested in.

Please select the dates you would like to view:

From: select

To: select

Select

Once you've selected the time period it will show you logs of all payments that have been added into the system.

TimeStamp	Amount	Receipt	Payment	Mode	User Name	Added By
2009-08-07 09:52:05	100.00	1234	Cash	Payment	sti-matt	bill_test

Note that this is only available to system administrators.

It's really really important that you change the password for the administrative user as soon as you log in for the first time.

Changing Administrator Password

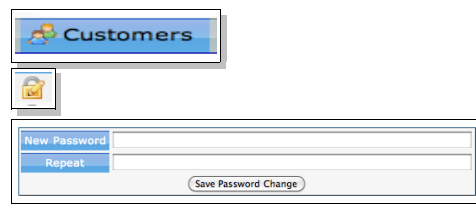
As we've stated, you ***must*** change the password when you log in for the first time.

The reason for this is that by default, every SmoothTorque installation has this same password available, and if you don't change it, anybody would be able to connect and run whatever calls they like for free.

This is not just something you should do, but something you ***absolutely must do***.

So, here's how you do it.

1. Click on the Customers tab on the top.
2. Click on the lock beside admin
3. Enter and repeat a new password
4. Click "Save Password Change"

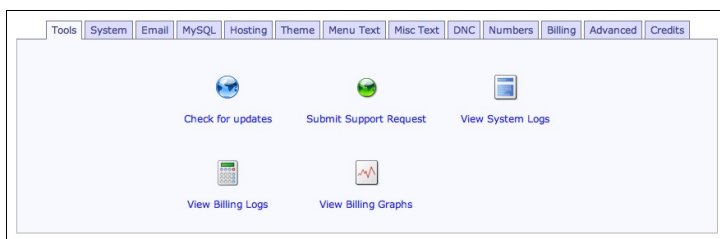


The screenshot shows the SmoothTorque web interface. At the top, there is a navigation bar with a 'Customers' tab. Below the navigation bar, there is a lock icon next to the 'admin' user. A modal window is open, displaying a 'New Password' form with two input fields labeled 'New Password' and 'Repeat'. A 'Save Password Change' button is located at the bottom of the modal.

We'll now continue on by setting up your system so that it suits your needs.

Customising SmoothTorque (Admin Page)

Because SmoothTorque is a white label solution, you can change a lot about the way that it behaves so that it suits your needs and can be resold as your own product – it doesn't even need to be called SmoothTorque!

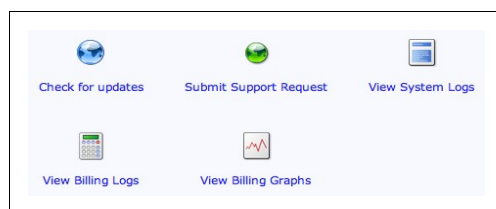


The way that most of this customization is done is via the Admin page. This section has a tabbed interface where you can set up various options. We'll run through each page one at a time.

Tools

The tools page is the first one you see when you go to the Admin section.

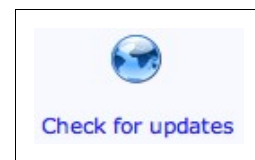
It provides quick links to a few things which you might find useful on a regular basis which is why they are on the front page.



Check For Updates

Clicking on this link will take you to a page which will let you know if there are any updates available for the system.

If there are, you can use the command “svn up” in the console of your web directory to update your system to the latest version.

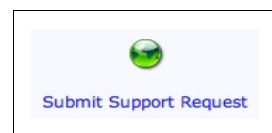


Whenever there are changes made to the system or database structure, we also add code to update any existing systems when you log in.

Therefore if you update a system, you should log out and back in to complete the update process.

Submit Support Request

This is just a link to remind you of the email address for sending support requests through to VentureVoIP if there is a problem with the system or if you notice a bug.



When you send an email, a support ticket will be created which you will be able to update via your email client.

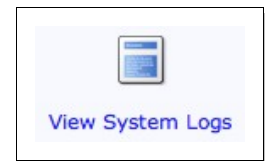
View System Logs

Full logs of all system activity are constantly stored by SmoothTorque.

You can view these logs by using the “View System Logs” link.

This will take you to a page where you can view campaigns that have been run as well as any information about why something has happened include unsuccessful logins and billing information.

2009-09-12 16:02:37	Successful login	matt
2009-09-12 14:36:24	Starting campaign	matt
2009-09-12 14:36:23	is only allowed to make 150000 calls because their credit is 300011.43 and the total cost per call is 2 based on an audio length of 10, a per minute cost of 10.50000 and a lead cost of 0.25000	matt
2009-09-12 14:36:23	Does have credit to start campaign (Credit: 2000121.4299999999 Credit Limit: 999990.0000000000)	matt
2009-09-12 14:36:21	Viewed Campaign Page	matt
2009-09-12 14:36:18	Stopping campaign	matt
2009-09-12 14:35:02	Starting campaign	matt
2009-09-12 14:35:00	is only allowed to make 150000 calls because their credit is 300011.43 and the total cost per call is 2 based on an audio length of 10, a per minute cost of 10.50000 and a lead cost of 0.25000	matt
2009-09-12 14:35:00	Does have credit to start campaign (Credit: 2000121.4299999999 Credit Limit: 999990.0000000000)	matt
2009-09-12 14:34:58	Viewed Campaign Page	matt
2009-09-12 14:28:33	Viewed Campaign Page	matt
2009-09-12 14:28:31	Stopping campaign	matt
2009-09-12 14:25:08	is only allowed to make 150000 calls because their credit is 300011.43 and the total cost per call is 2 based on an audio length of 10, a per minute cost of 10.50000 and a lead cost of 0.25000	matt
2009-09-12 14:25:08	Does have credit to start campaign (Credit: 2000121.4299999999 Credit Limit: 999990.0000000000)	matt
2009-09-12 14:25:04	Viewed Campaign Page	matt
2009-09-12 14:24:49	Stopping campaign	matt
2009-09-12 14:21:50	Starting campaign	matt
2009-09-12 14:21:50	is only allowed to make 150000 calls because their credit is 300011.43 and the total cost per call is 2 based on an audio length of 10, a per minute cost of 10.50000 and a lead cost of 0.25000	matt



View Billing Logs

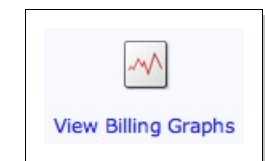
This is exactly the same as clicking the “Billing Logs” link in the header except that it shows billing information for all users of the system rather than just the currently logged in user.



View Billing Graphs

The billing graphs give you an overview of what has been going through the system in terms of revenue.

You will see a breakdown of profit by each custom that has a billing record in the system.



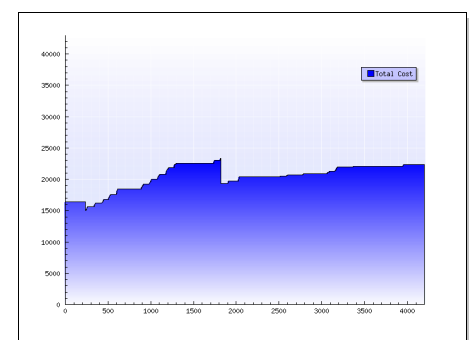
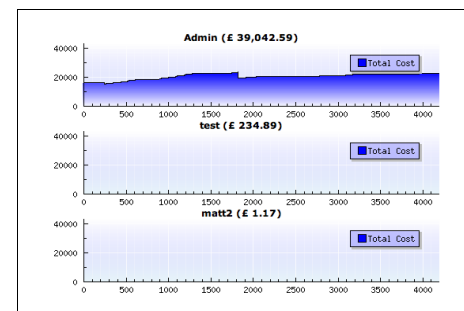
You can break this down into smaller time periods by clicking on one of the date selection links:

Today 5 Days 10 Days **30 Days**

If you click on one of the graphs you will be taken to another graph which is generated just for the customer you have clicked on.

Note that all billing graphs and logs require that you have enabled billing in the billing section of the Admin page.

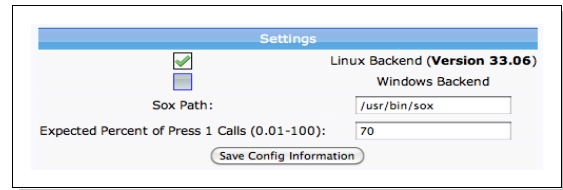
We'll explain the usage of this shortly.



System

The “System” tab of the Admin section provides a couple of feature which you may just like to leave at their default.

The first option is to select whether you are using the Linux or the Windows backend.

A screenshot of a web-based settings form titled "Settings". It features two radio buttons: "Linux Backend (Version 33.06)" which is selected with a green checkmark, and "Windows Backend" which is unselected. Below these, there is a text input field for "Sox Path:" containing the value "/usr/bin/sox". Another text input field for "Expected Percent of Press 1 Calls (0.01-100):" contains the value "70". At the bottom right of the form is a button labeled "Save Config Information".

Because the Windows backend (SineDialer) hasn't been used or supported for quite some time now, most people will have this selected on Linux Backend.

Sox Path

This is the location of a program called “Sox” on your Linux web server. You can find the location of this by going into the console of your Linux machine (or logging in via SSH) and typing:

```
which sox
```

Expected Percent of Press 1 Calls

This is quite an interesting one. SmoothTorque is a predictive system which utilises “fuzzy logic” in order to react to any changes in rates.

While this is ideal for running campaigns, it may take too long for some people to start a campaign when they know that the “press 1 rate” is going to be very low.

For example, if you have 10 agents, but you know that only 1 in every 1000 people is going to press 1 to talk to them, you can raise this rate.

Bear in mind that this rate is for the entire system.

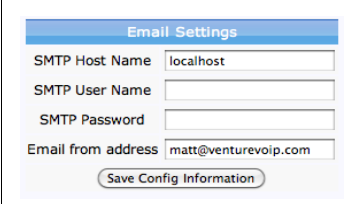
This only sets the initial rate and will not have any effect once the campaign has ramped up to the running speed.

If you make any changes to the form, you should click the “Save Config Information” button to save those changes.

Email

The email section is currently unused, and further information will be added to the manual once it has been made use of.

For the interim, it makes sense to set this information up if you know it, and if not, don't worry about it.



The Email Settings form contains the following fields: SMTP Host Name (localhost), SMTP User Name, SMTP Password, and Email from address (matt@venturevoip.com). A 'Save Config Information' button is at the bottom.

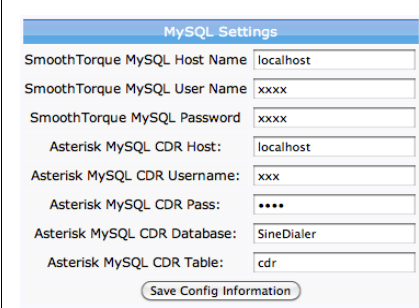
MySQL

MySQL is the database that SmoothTorque connects to.

Each SmoothTorque system can connect to two database systems.

One for the web interface and one for call detail records (CDR) for Asterisk.

Note that the tables you need for storing CDR are all provided in the “SineDialer” database that comes with SmoothTorque.

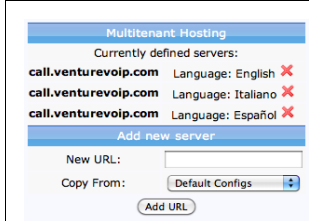


The MySQL Settings form contains the following fields: SmoothTorque MySQL Host Name (localhost), SmoothTorque MySQL User Name (xxxx), SmoothTorque MySQL Password (xxxx), Asterisk MySQL CDR Host (localhost), Asterisk MySQL CDR Username (xxx), Asterisk MySQL CDR Pass (****), Asterisk MySQL CDR Database (SineDialer), and Asterisk MySQL CDR Table (cdr). A 'Save Config Information' button is at the bottom.

Hosting

As SmoothTorque can be used for multi tenant hosting, you can add different URLs for access to the system. More information is available on this in the “Multi Tenant Hosting” chapter.

From here you can add a new URL or remove languages from the current settings.



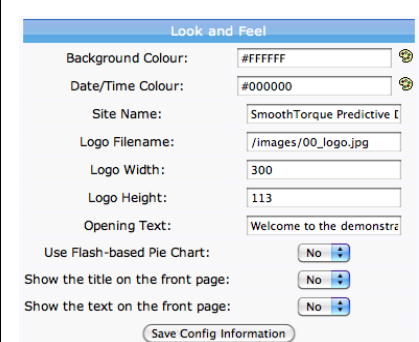
The Multitenant Hosting form shows 'Currently defined servers' with three entries: call.venturevoip.com (Language: English), call.venturevoip.com (Language: Italiano), and call.venturevoip.com (Language: Español). Below is the 'Add new server' section with 'New URL:' and 'Copy From:' (Default Configs) fields, and an 'Add URL' button.

Theme

This section is where you set up the main look and feel for the current site.

You can set up colours for the background and for the info bar, as well as setting up the main site text and the logo.

Let's run through a couple of the options available and explain how they work.



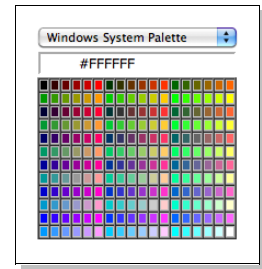
The Look and Feel form contains the following fields: Background Colour (#FFFFFF), Date/Time Colour (#000000), Site Name (SmoothTorque Predictive I), Logo Filename (/images/00_logo.jpg), Logo Width (300), Logo Height (113), Opening Text (Welcome to the demonstr), Use Flash-based Pie Chart (No), Show the title on the front page (No), and Show the text on the front page (No). A 'Save Config Information' button is at the bottom.

Background Colour

The background colour is the area above the menu bar behind your logo.

You should set this to the same colour as the background of your logo so that they fit together.

If you click on the palette icon (🎨) it will bring up a palette where you can select a colour you'd like to use.

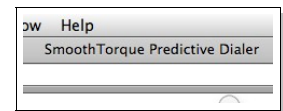


Date/Time Colour

This is used in the same way as the background colour but is for the text in the info bar (which sits just below the menu bar).

Site Name

This setting is used just about everywhere in the site. It is used for the page title (what you see in the header of your browser), as well as descriptions of the platform in both help and introductions.



Logo Filename

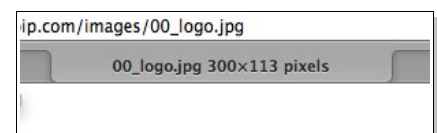
Here you can specify the name of an image that you have placed somewhere on the web server (if you wanted you could use a remote URL, but it would slow down the loading of the page).

Logo Width and Logo Height

In order to load the page quickly even when the image has not been downloaded to the client, you can specify the width and height of the logo.

This helps greatly for situations where a user of a server may have a great network connection to the server.

In order to find out the dimensions of your logo, you can just view the logo by right clicking on it and selecting “View Image” (or in Safari “Open Image In New Window”).



This should show you the details of the image in the title bar.

Opening Text

Any text you enter here is displayed above the login box on the main page (assuming you have enabled the option below “Show the text on the front page”).



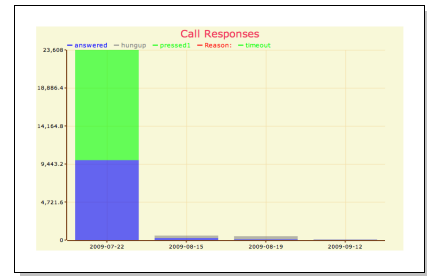
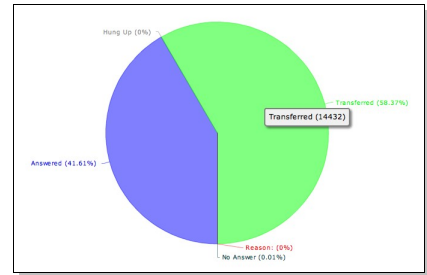
Use Flash Based Pie Chart

When you are viewing statistics for running campaigns, there are a couple of ways you can do it.

You can either use the older static graphs, or the newer flash based charts.

The reason for this option is that when we added the capability to display charts in a new way, we didn't want to affect anyone who was already used to the way it looked in the past.

For new installations we recommend you set it up to use these flash based pie charts.



Show Title/Text on the Front Page

These options let you decide what information you want to have on the page where people log in.

Once you have finished making changes, you can click the “Save Config Information” button.

Menu Text

In this tab you can specify what the text is that is displayed on the menu tabs. This is one of the ways that internationalisation is done.

The first thing you need to specify is the name of the language you are dealing with.

The next thing you can do is change the text of any of the menu items.

Once you have changed any of the names of menu text here, you can click the “Save Config Information” button to make the changes immediately apparent.

Try it now, change the “Home Menu Text” to “Home2”, click save, have a look at the Home button, then go and change it back.

The screenshot shows a web form titled "Menu Text". It contains several input fields, each with a label and a text box. The labels are: Language:, Home Menu Text:, Campaigns Menu Text:, Numbers Menu Text:, DNC Numbers Menu Text:, Messages Menu Text:, Schedules Menu Text:, Customers Menu Text:, Queues Menu Text:, Servers Menu Text:, Trunks Menu Text:, Admin Menu Text:, and Logout Menu Text:. The text boxes contain the following values: English, Home, Campaigns, Numbers, DNC numbers, Messages, Schedules, Customers, Queues, Servers, Trunks, Admin, and Logout. At the bottom of the form is a button labeled "Save Config Information".

Misc Text

This is a similar set of config options as the menu text except that it is for other miscellaneous text in the system.

Once you made any changes, click the save button to make them active.

The screenshot shows a web form titled "Other Text". It contains several input fields, each with a label and a text box. The labels are: Main Page Text:, Add Campaign Text:, View Campaigns Text:, Main Page Username Text:, Main Page Password Text:, and Main Page Login Text:. The text boxes contain the following values: To get started, click on the Campaign tab on top of the menu, Add Campaign, View campaigns, Username, Password, and Login. At the bottom of the form is a button labeled "Save Config Information".

DNC (Do Not Call)

Here you can specify the text that is used for describing the DNC Numbers pages, as well as having the option to have different DNC numbers for each customer.

Normally if someone presses 2 to be added to the DNC list, these changes mean that no client on the system will be able to dial that number.

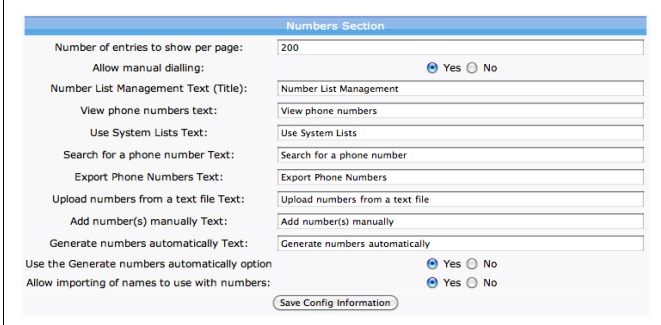
If you enable the different list for each customer option, then just because someone is in on DNC list, does not mean they are in another.

The screenshot shows a web form titled "DNC Numbers Section". It contains several input fields, each with a label and a text box. The labels are: Number List Management Text (Title):, View existing DNC numbers Text (Title):, Search DNC numbers Text (Title):, Upload DNC numbers Text (Title):, Add DNC numbers Text (Title):, and Use separate DNC entries for separate customers. The text boxes contain the following values: Do Not Call List, View existing DNC numbers, Search DNC numbers, Upload DNC numbers from a text file, Add DNC number(s) manually, and Yes. At the bottom of the form is a button labeled "Save Config Information".

Numbers

This section has quite a few options which can have an impact on how you deal with phone numbers as well as the definition of the text used in the system to describe phone numbers.

The text for the various options is quite self explanatory (if you change the text it will be changed in the numbers menus), so we'll just go through each of the non text options.



The screenshot shows the 'Numbers Section' configuration window. It contains several settings:

- Number of entries to show per page:** A text input field with the value '200'.
- Allow manual dialling:** A radio button group with 'Yes' selected and 'No' unselected.
- Number List Management Text (Title):** A text input field with the value 'Number List Management'.
- View phone numbers text:** A text input field with the value 'View phone numbers'.
- Use System Lists Text:** A text input field with the value 'Use System Lists'.
- Search for a phone number Text:** A text input field with the value 'Search for a phone number'.
- Export Phone Numbers Text:** A text input field with the value 'Export Phone Numbers'.
- Upload numbers from a text file Text:** A text input field with the value 'Upload numbers from a text file'.
- Add number(s) manually Text:** A text input field with the value 'Add number(s) manually'.
- Generate numbers automatically Text:** A text input field with the value 'Generate numbers automatically'.
- Use the Generate numbers automatically option:** A radio button group with 'Yes' selected and 'No' unselected.
- Allow importing of names to use with numbers:** A radio button group with 'Yes' selected and 'No' unselected.
- Save Config Information:** A button at the bottom right.

Number of entries to show per page

When you are listing phone numbers you obviously don't want to display 1 million at a time as the page would take forever to load. Here you can specify how many entries you would like on each page.

Allow manual dialling

Manual dialling is an interesting option which allows agents to log into the system and then click “Next Number” when they are ready for the system to dial a number – this is useful in situations where you have a campaign with a high answer rate or have a low number of agents (i.e. less than 5).

Allowing manual dialling here will present you with an extra option in the campaigns page so that you can initialise a campaign for manual dialling.

Use the generate numbers option

When you go into the numbers page of the system there is an option to generate a list of numbers sequentially.

If you don't want customers to be able to do this, you can disable the option entirely.

Allow importing of names to use with numbers

This enables and disables a feature whereby you can upload a list which has both a name and a phone number in it and then present the name to the person who is logged in to a call queue.

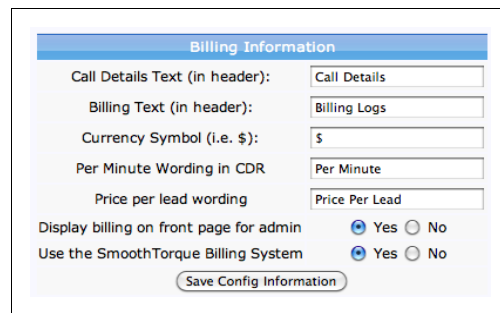
It requires that you set up the AGI file for reading this information – more information is available in the Appendix for Installation.

Billing

Here you can both set up the text and currency sign for billing as well as enabling the billing system entirely.

If you don't have the billing system enabled, then all options relating to billing will be disabled.

There is also an option here to “display billing on the front page for admin”. Turning this on means that if somebody logs onto the system with administrative privileges, they will see a summary of all billing information for the system.



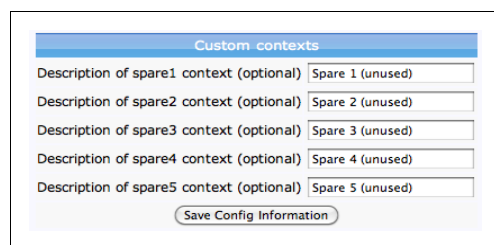
The screenshot shows a web form titled "Billing Information". It contains several input fields and checkboxes. The fields are: "Call Details Text (in header):" with a text input containing "Call Details"; "Billing Text (in header):" with a text input containing "Billing Logs"; "Currency Symbol (i.e. \$):" with a text input containing "\$"; "Per Minute Wording in CDR" with a text input containing "Per Minute"; and "Price per lead wording" with a text input containing "Price Per Lead". There are two checkboxes: "Display billing on front page for admin" and "Use the SmoothTorque Billing System", both of which are checked. At the bottom of the form is a button labeled "Save Config Information".

Advanced

Because some people like to customise the things that SmoothTorque does, we provide you with the option of using 5 custom Asterisk contexts for sending calls to.

In the dialplan these calls will be sent to contexts called spare1, spare2, spare3, spare4 or spare5.

Here you can specify how you would like those options to appear to the customer in the drop down list of campaign types.



The screenshot shows a web form titled "Custom contexts". It contains five rows, each with a label "Description of spareX context (optional)" and a text input field. The inputs are: "Spare 1 (unused)", "Spare 2 (unused)", "Spare 3 (unused)", "Spare 4 (unused)", and "Spare 5 (unused)". At the bottom of the form is a button labeled "Save Config Information".

Credits

The SmoothTorque website is built with the help of a lot of work from VentureVoIP as well as the use of quite a few amazing pieces of Open Source technology.

We've listed some of the components we've used here as well as a link to the website of the person who created the technologies.

If you make any changes to SmoothTorque that you'd like to commit back to the mainline code, we're more than happy to accept it and provide your details in the credits list.

This brings us to the end of the Admin section.

Hopefully you've learnt a bit about setting up the look and feel of the site.

We'll now move on to actually using the system.

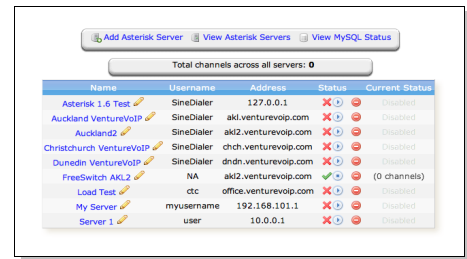


Servers

You're not going to be able to do much without servers – even if they're on the same machine.

Servers are split into two types – Asterisk™ Servers (or voice nodes) and MySQL Servers (or database servers).

While you can create as many Asterisk™ servers as you like, the number which will be used by SmoothTorque will depend on how many you have licensed.



Name	Username	Address	Status	Current Status
Asterisk 1.6 Test	SineDialer	127.0.0.1	✗	Disabled
Auckland VentureVoIP	SineDialer	ak12.venturevoip.com	✗	Disabled
Auckland2	SineDialer	ak12.venturevoip.com	✗	Disabled
Christchurch VentureVoIP	SineDialer	chch.venturevoip.com	✗	Disabled
Dunedin VentureVoIP	SineDialer	dndn.venturevoip.com	✗	Disabled
FreeSwitch AKL2	NA	ak12.venturevoip.com	✓	(0 channels)
Load Test	ctc	office.venturevoip.com	✗	Disabled
My Server	myusername	192.168.101.1	✗	Disabled
Server 1	user	10.0.0.1	✗	Disabled

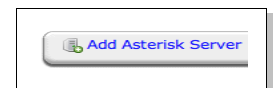
Asterisk Servers

Let's start by looking at the Asterisk Servers. These are the machines that will be making your phone calls, and if you are using in house queues will have your agents logged in.

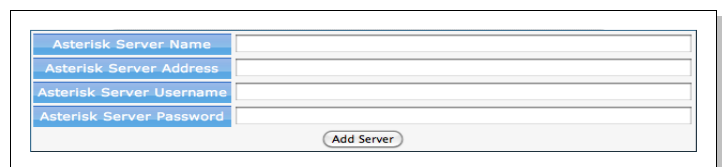


Add Server

Adding a server is as simple as clicking the “Add Asterisk Server” link in the box above the list of Asterisk servers.



Once you've clicked on this link you'll be taken to a page where you can specify how SmoothTorque is going to access this server.



Asterisk Server Name	<input type="text"/>
Asterisk Server Address	<input type="text"/>
Asterisk Server Username	<input type="text"/>
Asterisk Server Password	<input type="password"/>
<input type="button" value="Add Server"/>	

There are a few details you'll need to provide.

- Asterisk Server Name: Any name you like
- Asterisk Server Address: Either the IP address or host name of the server
- Asterisk Server Username: The username of an Asterisk Manager account
- Asterisk Server Password: The password of an Asterisk Manager account

Once you've filled out the fields, you can click the “Add Server” button to save it to the database.

Note that a server will not be enabled until you change its status (explained on the next page).

Edit Server

In order to edit a server, you can just click on the pencil icon beside the name of a server.

This will take you to a page where you can update the details.

Note that when you are editing a server it may appear that the password is longer than what you thought it was.

The reason for this is that we don't want to provide anyone with the passwords we have defined for the server.

If you don't change the text under the password stars, then the password will be left the same – you don't need to retype it any time you want to make changes.

Delete Server

Deleting a server is pretty simple. All you need to do is click the “Delete” button (🗑️).

When you click this button you will see a popup window which asks you to confirm that you would like to delete this entry.

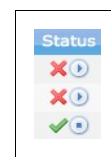
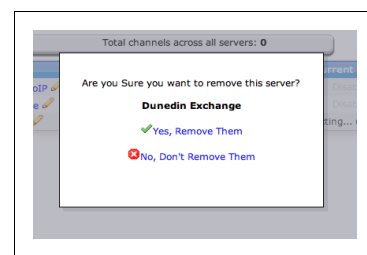
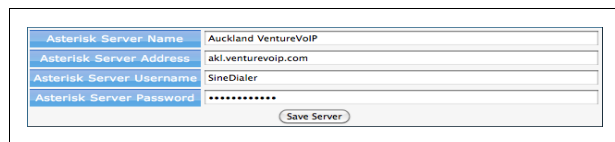
Either click “Yes” to remove the server, or “No” to return to the servers page again.

Change Server Status

Each server can be in one of three statuses:

1. Active – if the license level permits, this server will be used
2. Inactive – this server will not be used
3. Timeout – this server is having issues and has been temporarily disabled.

You can click the “play” or “stop” buttons beside the status to enable or disable a server.



MySQL Server Status

One of the bigger changes in later versions of SmoothTorque (after mid 2009) is that we now provide quite extensive information on what's going on with your database servers.



The reason for this is that as SmoothTorque systems grew larger and larger we found that MySQL became the bottleneck for performance.

We found that significant performance improvements could be made by tuning MySQL servers to match the needs of the software.

One of the first changes that is required if you are running a high performance cluster is to change the table types from MyISAM to InnoDB.

Database Statistics: Queries: 92,725,504 (40.468/sec) Uptime: 636:28:54					
Name	Rows	Total Size	Last Update	Last Check	Engine
billing	6	3 Kb	Wed Sep 16 19:00:10 2009	Sun Aug 23 7:14:42 2009	MyISAM Convert
campaign	96	11 Kb	Wed Sep 16 19:00:10 2009	Sun Aug 23 7:14:42 2009	MyISAM Convert
campaign_stats	115 (approx)	16 Kb	InnoDB free: 402432 kB		InnoDB Convert
campaigngroup	15	2 Kb	Thu Aug 20 14:33:51 2009	Sun Aug 23 7:14:42 2009	MyISAM Convert
campaignmessage	24	5 Kb	Wed Sep 16 14:42:09 2009	Sun Aug 23 7:14:42 2009	MyISAM Convert
cdr	14,800,931 (approx)	5.05 Gb	InnoDB free: 402432 kB		InnoDB Convert
config	393 (approx)	16 Kb	InnoDB free: 402432 kB		InnoDB Convert
customer	10	3 Kb	Tue Aug 25 11:06:58 2009	Sun Aug 23 7:14:44 2009	MyISAM Convert
dncnumber	41,326 (approx)	21.6 Mb	InnoDB free: 402432 kB		InnoDB Convert
engine_stats	2	3 Kb	Sun Sep 20 0:17:21 2009	Sun Aug 23 7:14:44 2009	MyISAM Convert
log	19,294 (approx)	2.5 Mb	InnoDB free: 402432 kB		InnoDB Convert
number	21,258,682 (approx)	4.19 Gb	InnoDB free: 402432 kB		InnoDB Convert
number_done	9,368 (approx)	1.2 Mb	InnoDB free: 402432 kB		InnoDB Convert
proffrac	85,557 (approx)	5.0 Mb	InnoDB free: 402432 kB		InnoDB Convert
queue	600	67 Kb	Thu Sep 17 17:42:17 2009	Sun Aug 23 7:14:46 2009	MyISAM Convert
queue_member_table	2	4 Kb	Thu Aug 20 11:55:08 2009	Thu Jan 1 1:00:00 1970	MyISAM Convert
queue_table	1	2 Kb	Thu Aug 20 11:55:08 2009	Thu Jan 1 1:00:00 1970	MyISAM Convert
rates	85,508 (approx)	5.0 Mb	InnoDB free: 402432 kB		InnoDB Convert

Basically MySQL ships with MyISAM tables enabled by default, but these use table level locking (basically only one thing can access a MySQL table if someone is writing to it) rather than row level locking (only one person can access a row in a table at a time).

This provides significant improvements and has now been provided as a simple point and click operation.

First though let's run you through the MySQL Servers page components.

Database Statistics

This is a status section which shows up at the top of the page.

Database Statistics:	
Queries: 92,733,865 (40.468/sec)	Uptime: 636:32:30

Normally it will just show you the number of queries on the system (including how many per second) and the Uptime (or how long since the last restart of MySQL).

Because the database statistics section is an ajax page insert, it will update itself every couple of seconds.

One of the other things it will occasionally show is queries which are either running slow, or are holding locks on a table. This allows you to spot if something is slowing down the system.

It will also show you if you have any “unrandomised numbers” in the database.

Basically all numbers in the database get a random number added to them to ensure that when you dial, the order of the numbers is random. If you use the web interface to import the phone numbers then this won't be an issue.

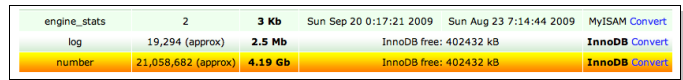
If however you import numbers directly from the command line of Linux, these random numbers

won't get added to the system and you will have a situation where numbers might be dialled in a sequential fashion.

Obviously this isn't too much of a problem if you're only running at 5 calls per second, but once you start looking at big numbers, you're likely to have the capability to bring down a telephone exchange if you aren't randomising numbers properly.

Database Tables

The next section of this page deals with the actual tables themselves.



engine_stats	2	3 Kb	Sun Sep 20 0:17:21 2009	Sun Aug 23 7:14:44 2009	MyISAM Convert
log	19,294 (approx)	2.5 Mb	InnoDB free: 402432 kB		InnoDB Convert
number	21,058,682 (approx)	4.19 Gb	InnoDB free: 402432 kB		InnoDB Convert

You are provided with static information on what the tables are doing and their size (or approximate size if using InnoDB).

Converting Between InnoDB and MyISAM

On the far right hand side of the page, there is a link you can click to convert between InnoDB and MyISAM tables.

The best things to convert to InnoDB are tables with lots of rows and tables that will be written to and read from at the same time.

If you convert your tables early after installation, the process will be quick. If you have a lot of numbers in your table, this may take some time (for example, the above screen shot has 21 million numbers and would take quite a long time to convert).

Tables I recommend you convert to InnoDB are:

- campaign_stats
- cdr
- config
- dncnumber
- log
- number
- number_done
- profracs
- rates
- sleeps

VentureVoIP obviously has a bit of experience in optimising MySQL servers, and if you are going to be running an enterprise level system it's recommended that you contact VentureVoIP to assist in getting you set up.

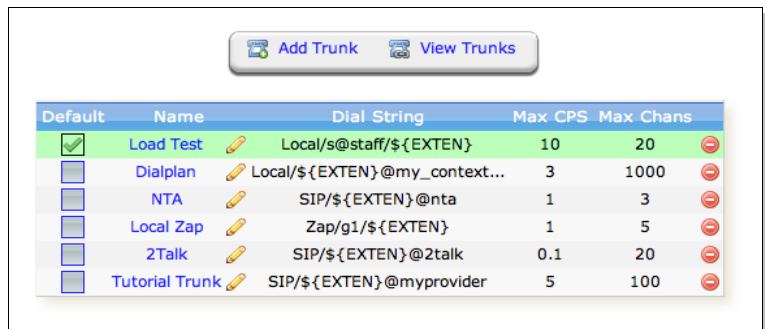
There are a number of options available in SmoothTorque which can significantly reduce the load on a large system, but they are disabled by default because of the extra load they create on small systems.

Trunks

The way that you make calls via the voice nodes is using trunks.

A trunk is basically a description of the way in which you make calls.

There are a few types of special trunks which you can define for the system if you'd like to do some load simulations.



Default	Name	Dial String	Max CPS	Max Chans
<input checked="" type="checkbox"/>	Load Test	Local/s@staff/\${EXTEN}	10	20
<input type="checkbox"/>	Dialplan	Local/\${EXTEN}@my_context...	3	1000
<input type="checkbox"/>	NTA	SIP/\${EXTEN}@nta	1	3
<input type="checkbox"/>	Local Zap	Zap/g1/\${EXTEN}	1	5
<input type="checkbox"/>	2Talk	SIP/\${EXTEN}@2talk	0.1	20
<input type="checkbox"/>	Tutorial Trunk	SIP/\${EXTEN}@myprovider	5	100

Let's look at the page you receive when you go to the trunks page.

At the top of the page you have two links available, “Add Trunk” and “View Trunks”.

The page you're on at the moment is the “View Trunks” page. You can click this link to return to this page.

Default Trunk

Underneath this you have a list of currently defined trunks (with some information about each), and you can see that one is lit up in green because it is the default trunk for this system.

If you click the little grey box (☐) beside one of the other trunks, it will become the default.

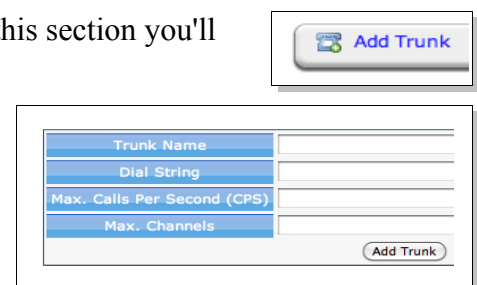
While you're initially working on a system it's quite a good idea to just have the load simulation trunk selected as the default because then nobody is going to accidentally be able to make calls you didn't mean to make.


You can actually specify that a customer has a trunk other than the default trunk. So you might have the system default set to load simulation, but then change particular customers to use trunks that actually make calls via a provider.

Add Trunk

If you click on the “Add Trunk” link at the top of any page in this section you'll be taken to a page where you can specify the information about the trunk.

Most of the settings here are pretty complicated so we'll explain each in detail.





Trunk Name	<input type="text"/>
Dial String	<input type="text"/>
Max. Calls Per Second (CPS)	<input type="text"/>
Max. Channels	<input type="text"/>

Add Trunk

Trunk Name

This one's pretty simple. Just give the trunk a name that makes sense to you (or other administrators of the system).

If you're adding a VoIP provider or something, you'll likely want to put their name as the name of the trunk.

Dial String

This is the most complicated of the configuration information.

What we're doing here is explaining to the voice nodes how to make a call.

Because SmoothTorque uses Asterisk™ to make calls, we need to tell Asterisk™ what we want it to do.

Basically every call that we want to make will have some basic information that will stay the same, and a phone number that will change.

We use the same piece of code as Asterisk™ to define the dial string.

Where we're talking about a phone number we use `${EXTEN}`

So for example if we had a dialstring of `SIP/${EXTEN}@myprovider` and we wanted to dial numbers of 5551234, 5551235 and 5551236, we end up sending to Asterisk™ the following:

```
SIP/5551234@myprovider
SIP/5551235@myprovider
SIP/5551236@myprovider
```

You'll note that we keep saying myprovider above. You would normally replace the word myprovider with the name of a SIP provider defined in the `/etc/asterisk/sip.conf` file.

We give you more information on setting this up in “Appendix B: Setting Up a VoIP Provider in Asterisk”.

SIP isn't the only way you would start a dialstring.

You can use multiple types of starts depending on what it is you want to do.

SIP: Send a call via a SIP VoIP provider or external gateway

IAX2: Send a call via an IAX2 VoIP provider

DAHDI: Send the call via digital line cards (ISDN E1/T1 etc)

Local: Use the Asterisk dialplan to send calls out (allows for things like custom failover)

Here's a few examples:

Send a call to a provider which is defined in `/etc/asterisk/sip.conf` as myprovider:

```
SIP/${EXTEN}@myprovider
```

Send a call to a provider which is defined in `/etc/asterisk/iax.conf` as myprovider:

```
IAX2/myprovider/${EXTEN}
```

Use group one of the physical telephone lines connected to this box via E1/T1 PRI:

```
DAHDI/g1/${EXTEN}
```

Send the call to a context called mycontext in the Asterisk dialplan (the extension it arrives at will be the phone number).

```
Local/${EXTEN}@mycontext/n
```

Max Calls Per Second

This is just the maximum number of calls that this provider or trunk can accept in calls per second on this trunk. You'll likely need to ask your provider what their capacity is – bear in mind that while a lot of VoIP providers claim to support SmoothTorque's upper dialling rate, a lot find out pretty quickly that they can't.

If you need some advice on providers that are capable of large CPS (Calls Per Second), please contact your reseller of the system or VentureVoIP directly.

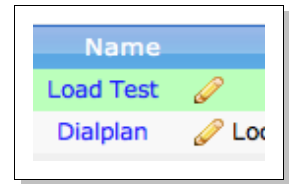
Max Channels

Again, reasonably simple, how many channels can this trunk take at the same time.

Edit Trunk

Editing a trunk is pretty much the same as adding a trunk. In order to edit a trunk, just go into the “View Trunks” page, and click on the pencil beside the name of the trunk.

You can change any details you like and then click “Save Changes” once you're done.

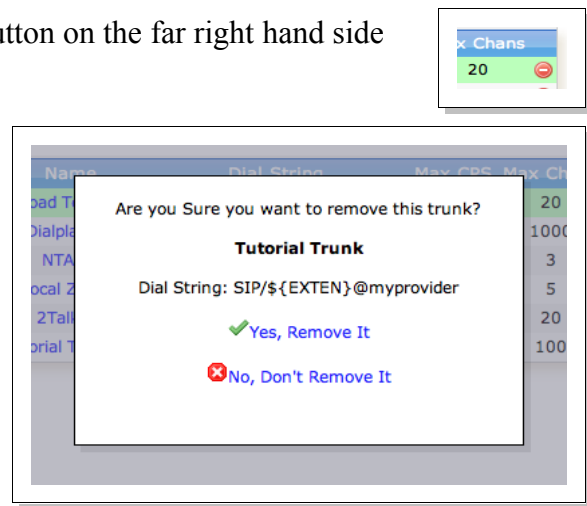


Delete Trunk

You can delete a trunk by clicking on the red delete button on the far right hand side of the list of trunks.

If you click on this button you'll get a popup page which asks you to confirm that you do in fact want to delete the trunk.

If you do, click yes and if you don't, click no.

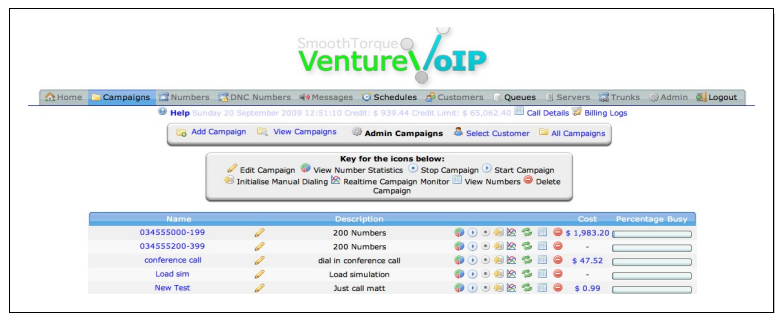


Campaigns

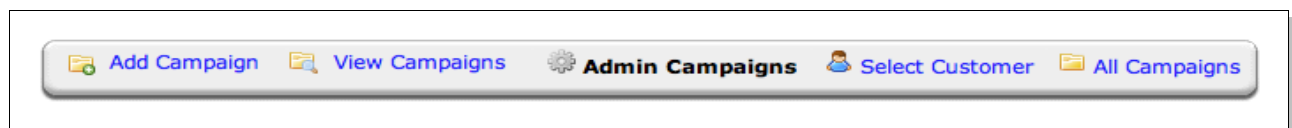
This page is where you do everything to do with a campaign.

From here you can add, delete, start, stop, refresh campaigns plus a lot more.

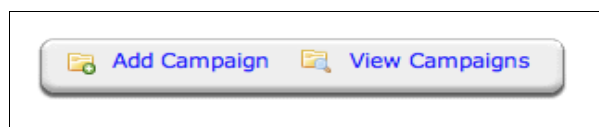
For the user this is basically the main page.



Lets examine the areas of the page one at a time so you can get the hang of it starting with the top section bar:



This provides you with a few more options that what you'd see if you were logged in as a normal user:



Underneath this you have a “key” which is used to explain what all of the icons do:



Followed by the list of all campaigns you have created with various pieces of information available:

Name	Description	Cost	Percentage Busy
034555000-199	200 Numbers	\$ 1,983.20	
034555200-399	200 Numbers	-	
conference call	dial in conference call	\$ 47.52	
Load sim	Load simulation	-	
New Test	Just call matt	\$ 0.99	
New test campaign	A campaign that we're going to run for a test...	-	
New version load test	New version load test	-	

So let's start by running along each of the options in the top section..

Add Campaign

This is what you'll click to create a new campaign.

This is the heart of the system. You enter all information about what you want a campaign to do on this page.

A screenshot of the 'Add Campaign' form. It features three input fields on the left: 'Campaign Name', 'Campaign Description', and 'Type of Campaign'. To the right of these fields is a dropdown menu with the text 'Please chose a type of campaign...' and a blue arrow icon. Below the dropdown is a button labeled 'Add Campaign'.

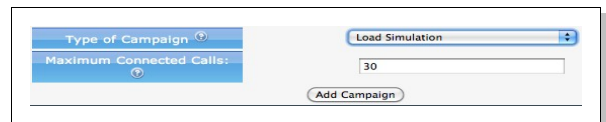
From the start you're just going to add a couple of details. The campaign name is just any short text you'd like to use to describe your campaign. The campaign description is a more detailed description of what it is the campaign does.

Next you'll need to select a type of campaign.

We'll go through these one at a time because the options for them change based on what you select.

Load Simulation

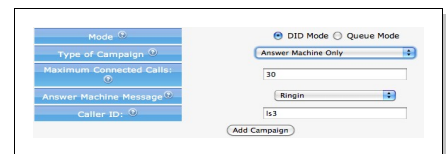
This is used to test out the system to see how things work with particular settings. The only piece of information you need to give is the maximum number of connected calls – this is basically the number of agents you'd like to test with.

A screenshot of the 'Load Simulation' form. It shows a 'Type of Campaign' dropdown menu set to 'Load Simulation'. Below it is a 'Maximum Connected Calls' input field with the value '30'. At the bottom is an 'Add Campaign' button.

Note that in order to run a load simulation campaign you'll also need to be using the load simulation trunk.

Answer Machine Only

This is a campaign where you just want to broadcast messages to an Answer Machine. You can specify how many calls you want at one time, the caller id you'd like to use and what message you'd like to play.

A screenshot of the 'Answer Machine Only' form. It shows a 'Mode' dropdown menu set to 'Answer Machine Only'. Below it are three input fields: 'Maximum Connected Calls' with the value '30', 'Answer Machine Message' with the value 'Ringin', and 'Caller ID' with the value '1s3'. At the bottom is an 'Add Campaign' button.

You can find more information on uploading messages etc in the section titled “Messages”.

If you are using this campaign type and the system detects a human answering the phone, it will immediately hang up the call.

Immediate Live

Here we start to see some of the slightly more complicated options.

The first one is “Mode”.

Basically the system is going to connect calls to agents if the call is answered by a human, and hang up the phone if it detects an answer machine.

This method will not play any recorded messages.

So, how is going to do this? There are two possible ways that SmoothTorque can connect calls to agents. The first is DID Mode. This is the default. What happens here is that when it wants to send a call to an agent, it dials a number (the DID) for the call centre. This means that a call centre can use the system while utilising their existing telecommunications infrastructure.

The second mode is Queue mode. This is not quite as scalable as it will only work in situations where you have one voice node (there are ways of getting around this but DID mode is recommended for large installations because of the separation it provides).

The last detail you'll need to provide here is the phone number of the call centre.

The screenshot shows a web form for configuring a campaign. On the left, there is a sidebar with a list of fields: Campaign Name, Campaign Description, Mode, Type of Campaign, Maximum Connected Calls, Caller ID, and Call Center Phone Number. The main area on the right contains the configuration for the selected 'Mode'. The 'Mode' is set to 'DID Mode' (selected with a radio button) and 'Queue Mode' (unselected). Below this, the 'Type of Campaign' is set to 'Immediate Live' via a dropdown menu. The 'Maximum Connected Calls' is set to 30. The 'Caller ID' is set to 5551234. The 'Call Center Phone Number' is set to 5551234. At the bottom right, there is an 'Add Campaign' button.

Press 1 Live Only

This campaign type will start playing a recorded message if it detects a human, but hang up the phone if it detects an answer machine.

If the person who is listening to the message presses 1 (i.e. press 1 to talk to someone now) then the call is transferred to the agent.

The screenshot shows a web form for configuring a campaign. On the left, there is a sidebar with a list of fields: Mode, Type of Campaign, Maximum Connected Calls, Live Message, DNC Confirmation Message, Caller ID, and Call Center Phone Number. The main area on the right contains the configuration for the selected 'Mode'. The 'Mode' is set to 'DID Mode' (selected with a radio button) and 'Queue Mode' (unselected). Below this, the 'Type of Campaign' is set to 'Press 1 Live Only' via a dropdown menu. The 'Maximum Connected Calls' is set to 30. The 'Live Message' is set to 'Self Advertising' via a dropdown menu. The 'DNC Confirmation Message' is set to 'warning' via a dropdown menu. The 'Caller ID' is set to 5551234. The 'Call Center Phone Number' is set to 5551234. At the bottom right, there is an 'Add Campaign' button.

If the person who is listening to the message presses 2, then they will be added to the DNC (Do Not Call) list, and will then be played a DNC confirmation message. Something along the lines of “your phone number has been added to our do not call registry, we apologise for any inconvenience”.

Immediate Live and Answer Machine

This is quite a standard type of campaign to run.

If the system detects a human, it will transfer them to a call centre agent. If it detects an answer machine, it will wait for the beep and leave a recorded message.

The screenshot shows a web form for configuring a campaign. On the left, there is a sidebar with a list of fields: Mode, Type of Campaign, Maximum Connected Calls, Answer Machine Message, Caller ID, and Call Center Phone Number. The main area on the right contains the configuration for the selected 'Mode'. The 'Mode' is set to 'DID Mode' (selected with a radio button) and 'Queue Mode' (unselected). Below this, the 'Type of Campaign' is set to 'Immediate Live and Answer Machine' via a dropdown menu. The 'Maximum Connected Calls' is set to 30. The 'Answer Machine Message' is set to 'Ringin' via a dropdown menu. The 'Caller ID' is set to 5551234. The 'Call Center Phone Number' is set to 5551234. At the bottom right, there is an 'Add Campaign' button.

Press 1 Live and Answer Machine

This campaign type is pretty much the same as the “Immediate Live and Answer Machine” campaign type described above except that instead of transferring the person being called directly to a staff member, it plays them a message, and if they press 1 will transfer them to a staff member. Again, they can press 2 to be added to the DNC list.

The screenshot shows a web form for configuring a campaign. On the left, there is a vertical list of fields: Mode, Type, Maximum Connected Calls, Live Message, Answer Machine Message, DNC Confirmation Message, Caller ID, and Call Center Phone Number. On the right, the configuration details are shown. The 'Mode' is set to 'DID Mode'. The 'Type' dropdown is set to 'Press 1 Live and Answer Machine'. The 'Maximum Connected Calls' is set to 30. The 'Live Message' field contains the text 'The message to leave to the answer machine'. The 'Answer Machine Message' field is empty. The 'DNC Confirmation Message' field is empty. The 'Caller ID' field is set to 5551234. The 'Call Center Phone Number' field is set to 5551234. There is an 'Add Campaign' button at the bottom right.

Direct Transfer

This option doesn't use any answer machine detection at all.

As soon as a call is answered it sends it directly to the call centre staff member.

The screenshot shows a web form for configuring a campaign. On the left, there is a vertical list of fields: Mode, Type, Maximum Connected Calls, Caller ID, and Call Center Phone Number. On the right, the configuration details are shown. The 'Mode' is set to 'DID Mode'. The 'Type' dropdown is set to 'Direct Transfer'. The 'Maximum Connected Calls' is set to 30. The 'Caller ID' field is set to 5551234. The 'Call Center Phone Number' field is set to 5551234. There is an 'Add Campaign' button at the bottom right.

Immediate Message Playback

This again doesn't use any answer machine detection, but instead of connecting directly to a call centre it just plays a message, with no call centre in place at all.

This type of campaign is best for doing emergency broadcasts (for example to warn an area about a coming tsunami).

The screenshot shows a web form for configuring a campaign. On the left, there is a vertical list of fields: Mode, Type, Maximum Connected Calls, Live Message, and Caller ID. On the right, the configuration details are shown. The 'Mode' is set to 'DID Mode'. The 'Type' dropdown is set to 'Immediate Message Playback'. The 'Maximum Connected Calls' is set to 30. The 'Live Message' field is empty. The 'Caller ID' field is set to 5551234. There is an 'Add Campaign' button at the bottom right.

Fax Broadcast

If you have set up faxing via your Asterisk servers, you can use this to do fax broadcasting. Note that this is not something that is included with the base package, and that it requires extensive knowledge of Asterisk™ in order to do it.

The screenshot shows a web form for configuring a campaign. On the left, there is a vertical list of fields: Type, Fax Message, and Caller ID. On the right, the configuration details are shown. The 'Type' dropdown is set to 'Fax Broadcast'. The 'Fax Message' field is empty. The 'Caller ID' field is set to 5551234. There is an 'Add Campaign' button at the bottom right.

Spare Contexts

These can be set up to provide custom configurations to do any type of routing that you can do in Asterisk™.

These will need to have been set up in the Administration section under the “Advanced” page.

Starting and Stopping Campaigns

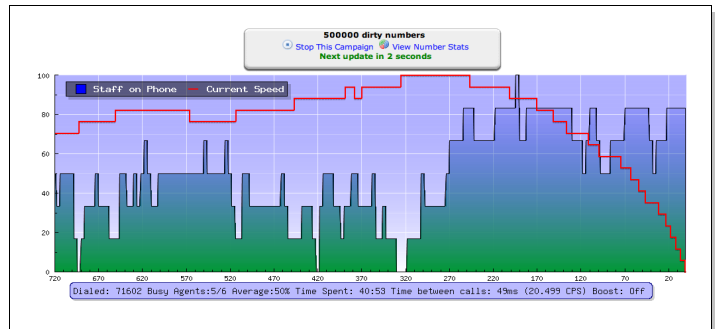
Running campaigns

Engine Status

The engine status page shows you real time graphing of the status of everything in the back end dialler.

The page is split into three sections.

At the top of the page it shows you the button for stopping the campaign as well as a link which takes you to the real-time campaign report (“View Number Stats”).



In the middle of the page is the graph.

It's basically like an earthquake monitor or a heart rate monitor.

When something happens, it appears on the right hand side of the graph and over time slowly moves across to the left hand side.

So the information on the left hand side of the page is actually from 720 seconds ago (12 minutes).

The part that goes from green to blue is the percentage of busy agents.

The red line shows you the speed that it is running at (this is scaled to it's basically just comparing information across the page – i.e. it is relative speed). The graph will adjust the scales automatically.

Underneath the graph, you'll see some general information about how the campaign is running:

Dialed: 92006 Busy Agents: 5/8 Average: 30% Time Spent: 95:12 Time between calls: 34ms (29.809 CPS) Boost: 2.53%

From the left hand side let's go through each of the various pieces of information.

Dialed is the number of numbers which have been dialed so far (note the American spelling of Dialed though – we're slowly moving away from this).

Next is the number of busy agents right this second.

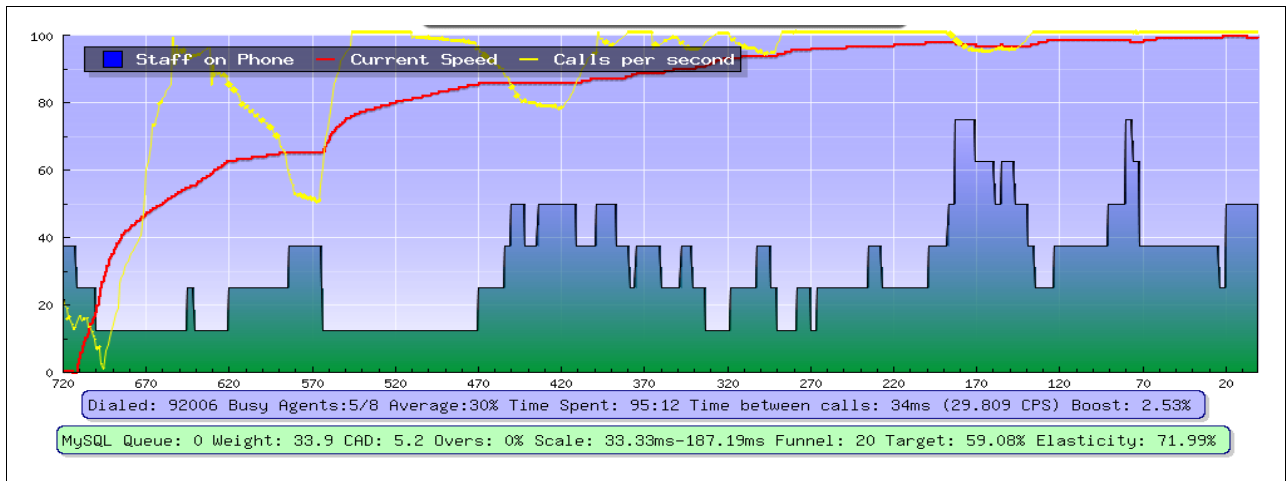
Next after this is the average. Normally this would be around 50-70% for this number of agents, but you can see from the calls per second on the right (29.809 CPS) that the system is running as fast as it can for these calls (the trunk is obviously limited to 30 CPS).

If a campaign is not responding quickly enough and has a below average connection rate (and we

have excess dialling capacity) the system will do a boost in order to try and temporarily run at a higher than ideal speed to get us a base to keep the number of busy agents up.

This is displayed in the bottom section by the boost percentage.

If you're wanting really hardcore information you can add “&debug=1” to the URL and you'll be presented with a slightly different page:



You'll note that it has an additional yellow line (this is the actual ms between calls including boost and a couple of extra algorithms).

Also, there is now another information bar at the bottom of the graph:

MySQL Queue: 0 Weight: 33.9 CAD: 5.2 Overs: 0% Scale: 33.33ms-187.19ms Funnel: 20 Target: 59.08% Elasticity: 71.99%

Let's run through the extra debug information which is provided.

First we have the MySQL Queue. This is discussed in the section “Database Funnels” and shows how many SQL queries SmoothTorque has that are outstanding for sending to MySQL.

The next is the Weight. This is a value that looks at how it has been performing lately, i.e. if it has been generally moving up lately (more people coming on the phone) then the weight will be positive. Alternatively, if over the last while people have been coming off the phone then the weight is negative.

CAD is the Cumulative Area Difference.

If you can imagine that there is a line that runs across the graph with where the program thinks the speed should be, i.e. the ideal speed based on calculations.

If you look at the actual speed, as a line that is moving up and down above this imaginary line, then the “cumulative area difference” is the area between the actual speed and the ideal speed. For example if we're running a lot faster than we think we should be over a long period of time then the CAD is going to be positive.

If we've spent a long time running slower than we think we should then the CAD will be negative.

If we have basically been moving around the point for the ideal speed, then the CAD will be zero.

The next piece of information is the scale for the yellow line which measures the time between calls over time.

The Funnel value tells you how many calls are in the funnel waiting to be sent to an Asterisk™ server. For more information on this see “Voice Funnels”;

The Target is what we should be able to expect as an average busy percentage based on the number of agents there are. We're always trying to get to this number.

The more agents you have in a campaign, the higher this will be.

The final figure here is Elasticity. The idea of elasticity is to stop the program from going into oscillations if there are large changes in the busy percentage of agents.

Normally a system would slow down a lot when a lot of agents come on the phone, but quite often this can cause a system to have a subsequent drop in the number of calls. This would normally cause a system to speed up, which would lead to the number of calls increasing and so on.

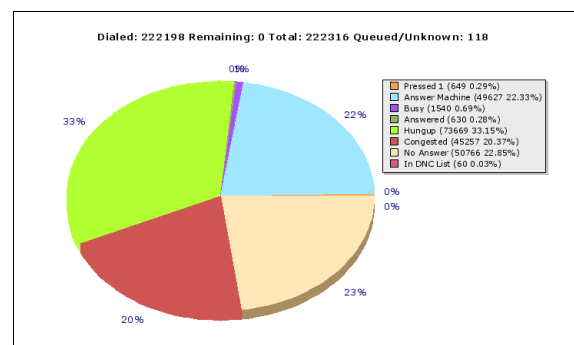
This type of loop-back is called oscillation.

What the system does is that it detects this type of movement and reduces the ability for it to go up or down in speed, thereby causing it to centre in on a good rate and then slowly moving up from there. Gradually over time the elasticity goes back to 100%, allowing the system to make any changes to rate it likes. We therefore can respond very quickly to large changes without bouncing around when things change rapidly.

Real-time Campaign Report

Depending on what you have got configured in the Administration section under “Use Flash Based Pie Chart” you will either see the original graph (show to the right) or the replacement flash chart.

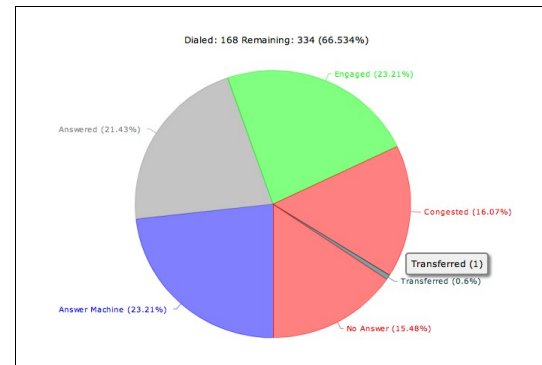
The flash charts use quite a significantly smaller amount of CPU on the server as all the graphics are calculated locally on the client.



New Flash Campaign Report

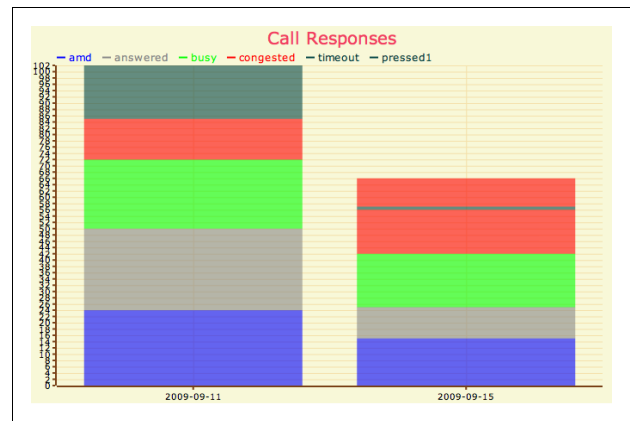
The new flash based charting provides you with a couple of different options in terms of graphs.

The first of the graphs is a pie chart which shows the same information that the older chart showed except that it use the new flash based charting.



The next is the call responses. Basically this looks at how people have responded over time.

Every time that you run the campaign the results will be updated in real time so that you can compare them to previous campaigns.



View Campaigns

This is the main page you start with when you go to the campaigns page.

Lets go through the parts of the campaigns list one by one.

Edit Campaign

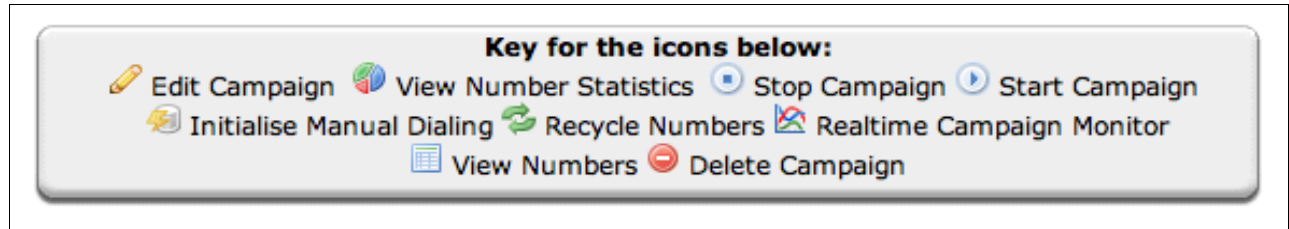
Name	Description	Cost	Percentage Busy
03455000-199	200 Numbers	\$ 1,983.20	
03455000-199	200 Numbers	-	
conference call	dial in conference call	\$ 47.52	
Load sim	Load simulation	-	
New Test	Just call mats	\$ 0.99	
New test campaign	A campaign that we're going to run for a test...	-	
New version load test	New version load test	-	
Self Advertising (03474200-0347425...	Advertising for our message broadcasting serv...	\$ 8.60	

On the left hand side you have the name of the campaign and a pencil. Clicking on either will take you to the Edit Campaign Page.

Control Buttons

These allow you to do various things with a campaign.

You can see more information on what each button does by referring to the key at the top of the page:



There are a couple of options here which require a little more information.

Initialise Manual Dialling

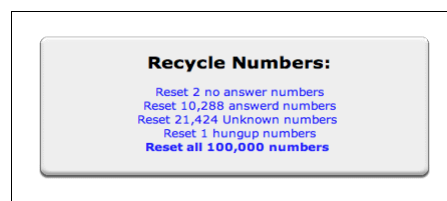
If you have very low numbers of agents (less than 5), it may be better to just have them dialling numbers by clicking on a “Next Number” button.

If you would like to use a campaign in this fashion it will need to be initialised for manual dialling first. You can do this by clicking the link.

You will next need to create some customers who have a log in type of “Agent”.

Recycle Numbers

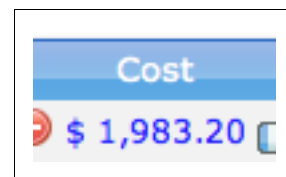
When you run a campaign there might be certain types of responses that you want to try again. You can do this by using the recycle numbers link. It will ask you what types of numbers you would like to reset the status of back to “new”.



Campaign Cost

If you have enabled billing for the system and are running the appropriate cron jobs to update billing information, you'll see a cost next to each campaign.

This information is updated in real time.

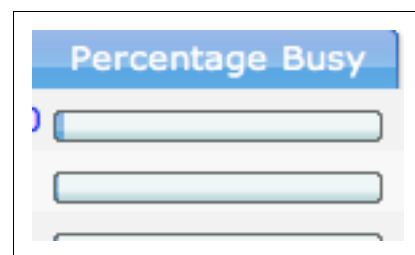


Percentage Busy

The far right hand side of the window shows the percentage of staff that are busy for each campaign.

This can be useful if you're watching a system with multiple campaigns running at the same time.

This information is updated in real time.



Admin Campaigns

This will take you to just viewing your own campaigns if you have switched to viewing another customer's campaigns.

Select Customer

Here you can select a specific customer whose campaigns you would like to view.

Once you have selected a customer you will be returned to the campaigns page, but you will see it as if you were logged in as that customer.



All Campaigns

This provides a list of all campaigns on the system so you can see the status of the system as a whole.

Numbers

As you can imagine, numbers are quite important to a campaign!

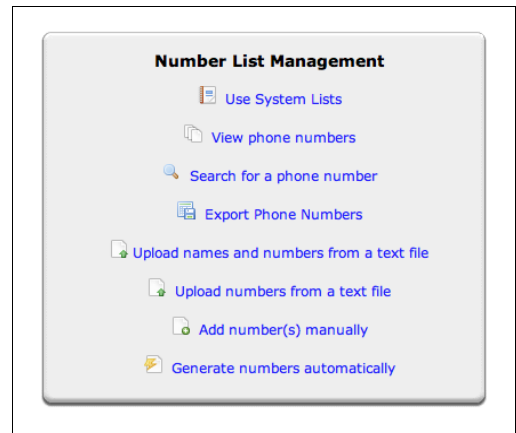
There are a few concepts which are important here before we start going through the list.

First off are “System Lists”. These are lists of numbers created by the administrator of the system which anyone is able to use.

Depending on the billing for the system, you can set up users to be charged per lead that they use (as well as much more detailed information). You can see more information on how things are billed in the section entitled “Customers”.

Depending on the configuration in the Admin section under “Numbers” you may see less options than what have been provided in the screen shot.

Let's go through each of the options provided here and explain them.



Use System Lists

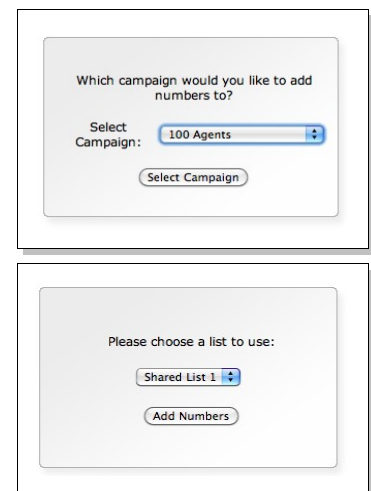
If you click on the “Use System Lists” link, you will be taken to a page where you're asked which campaign you would like to add the numbers to.

Once you've selected the campaign from the drop down list, click the “Select Campaign” link.

You will next be taken to a page where you can select which shared list to import the numbers from.

One important thing to note here is that the user will only be shown shared lists that they have been given access to.

You can add and remove access to shared lists from a customer's account by editing the details for that customer in the “Edit Customers” page.



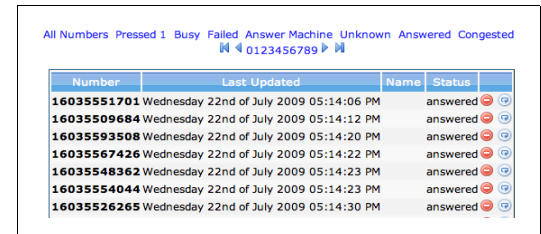
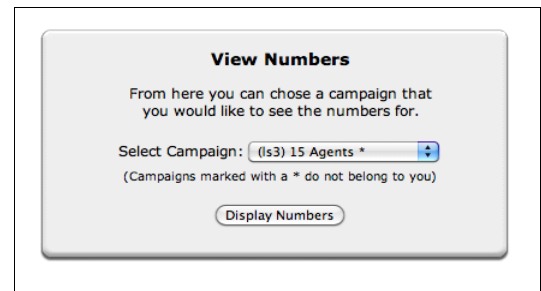
View phone numbers

When you click on the link to view the phone numbers you are taken to a page where you can select the campaign you would like to see the numbers for.

If you are an administrator you will be able to select any campaigns in the system.

Any campaigns which have an asterisk beside them are campaigns that do not belong to the account you are currently logged in with (i.e. have been created by another user).

Once you select which campaign you would like to view the numbers for you will be taken to another page.



Number	Last Updated	Name	Status
16035551701	Wednesday 22nd of July 2009 05:14:06 PM		answered
16035509684	Wednesday 22nd of July 2009 05:14:12 PM		answered
16035593508	Wednesday 22nd of July 2009 05:14:20 PM		answered
16035567426	Wednesday 22nd of July 2009 05:14:22 PM		answered
16035548362	Wednesday 22nd of July 2009 05:14:23 PM		answered
16035554044	Wednesday 22nd of July 2009 05:14:23 PM		answered
16035526265	Wednesday 22nd of July 2009 05:14:30 PM		answered

By default it will show you all numbers in the campaign, but you can click on one of the links at the top of the page to only show you one type of response.

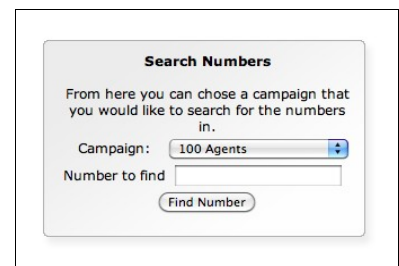
You will normally be shown 200 entries per page, although this can be changed in the “Number of entries to show per page” setting in the Administration section.

On the right hand side of this page you will see two buttons. The red one will delete the number, and the recycle icon can be used to change the number's status back to new.

Search for a phone number

If you're looking for a particular number, you can select a campaign to search, and then type in a number that you're looking for.

The system will then search the campaign and provide you with any results it finds so that you can delete, alter, or see the status of a particular number.



Export Phone Numbers

You can export phone numbers from the system based on a few criteria.

You can either export all of the numbers for a campaign or you can export the numbers which have a particular status. For example you might want to export the list of all numbers which were busy so that you can create a new campaign using these numbers.



Upload names and numbers from a text file

This option will only appear if you have enabled this feature in the Administration section (see “Allow importing of names to use with numbers”).

The first thing you'll need to do is select which campaign you would like to import into.

If you are an Administrator you will also be able to select “Shared List” which will create a new shared list that you can provide other users with access to.

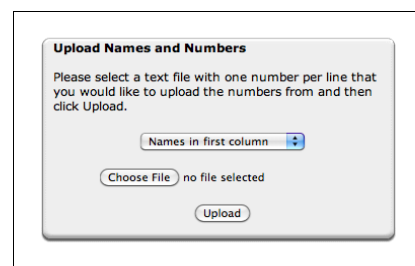
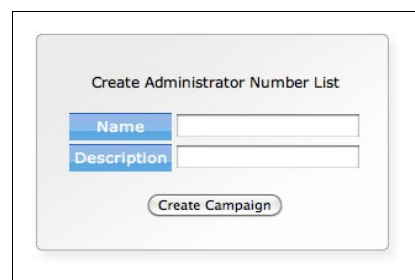
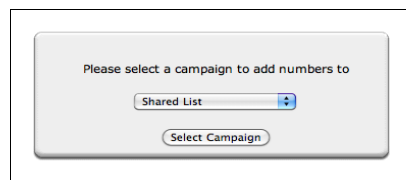
If you select the “Shared List” option, you will be presented with another page where you can give a name and description for the list.

Alternatively you can import the numbers into an existing campaign.

Either way, the next thing you'll need to tell the system is how the file you're about to import is structured.

Either it will have names in the first column and numbers in the second column or the other way around.

Next you'll need to select a CSV or TXT file to upload, and click the “Upload” button.




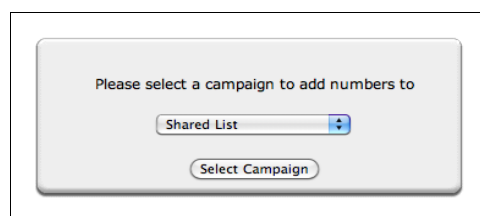
Upload numbers from a text file

Uploading numbers from a text file is pretty much identical to the description above except that you don't need to specify information about the position of names (as the list should only contain phone numbers).

Add number(s) manually

If you just want to add a couple of numbers (or test calling a number), the best way to go is to just add them manually.

First select a campaign, then type in the phone numbers you'd like to use.



Generate numbers automatically

One thing you can do with SmoothTorque is call lists of numbers where you're not even sure if the numbers are connected or in use.

This allows you to effectively generate lists of phone numbers which are connected (by exporting the numbers after running a campaign).

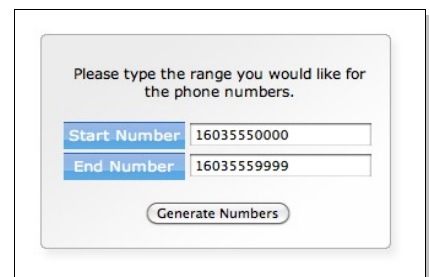
This option can be enable or disabled in the Administration section (see “Use the generate numbers option”).

Again, you'll need to select a campaign to add the numbers to (or use the “Shared Lists” option in you're an Administrator).

Once you've done this, you'll be taken to a page where you can select the start and end number for generation.

The system will generate all numbers between the start and end numbers (inclusively).

Once you've typed your start and end number, you can click the “Generate Numbers” button and it will start creating these numbers for you.

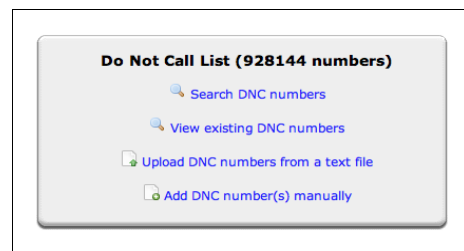


The screenshot shows a web form titled "Please type the range you would like for the phone numbers." It contains two input fields: "Start Number" with the value "16035550000" and "End Number" with the value "16035559999". Below these fields is a button labeled "Generate Numbers".

DNC Numbers

This section is for dealing with DNC numbers.

DNC numbers are “Do Not Call” numbers. These are people who you've either imported into the database, or who have pressed 2 while listening to a message.

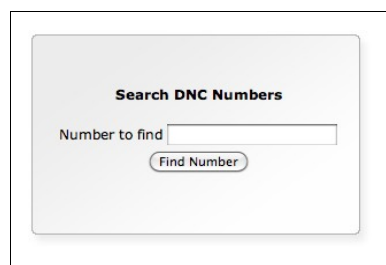


Search DNC numbers

If you're wanting to search for a particular number in the DNC list you can use this option.

The only piece of information you need to provide is the number that you're looking for.

Once you've done this, click the “Find Number” button to see if it is in the DNC list.



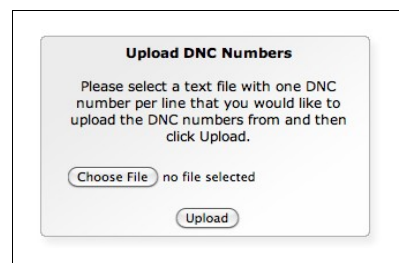
View existing DNC numbers

This will simply show you a list of DNC numbers in the system with an option to delete them.

Upload DNC numbers from a text file

This is pretty simple.

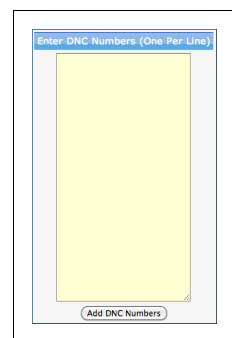
Just select the list on your computer and click the “Upload” button.



Add DNC number(s) manually

Clicking this option will take you to a page where you can add numbers manually to be added to the DNC list.

Just type one phone number per line and click the “Add DNC Numbers” button to save them.



Messages

The messages section of the web site deals with both Audio and Fax messages.

Note that Fax messages require quite advanced set up of your Asterisk™ machine, and normally doesn't work using VoIP.



First a little bit of information about the format that is required for your messages.

An audio message should be in the standard CD quality format (16 bit 44.1Khz Wave file).

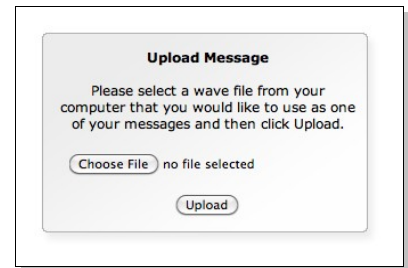
A fax message should be a G4 formatted Tiff image.

Upload New Audio Message

Clicking on this link will allow you to add a new audio message to the system.

The first thing you need to do is choose a file from your computer, and then click the “Upload” button.

When you upload an audio message to the system it will be converted into the correct format for playing by Asterisk™ (.slin format, 16 bits, 8Khz).



There are cron jobs which are run on the SmoothTorque web controller which subsequently copies these files to the correct directories on your Asterisk™ machines.

Once the file has been uploaded you'll be asked to give it a name and a description.

Upload New Fax Message

Clicking this link is pretty much the same as an audio message except that it is used for doing fax broadcast campaigns.

Again you just need to select a file from your computer to upload, and click the “Upload” button.

You'll be asked for a name and description once the file has been uploaded.



View All Messages

This returns you to the main page you see when you go to the messages section.

Preview Message

You can listen to audio messages and view fax messages by clicking on the preview button to the right of each message.



Delete Message

Deleting a message is quite simple. You just click the red delete button at the far right of the line.



Schedules

If you have set up the system to run schedules (not enabled by default), you can set up schedules to run and stop campaigns automatically.

Add Schedule

You can add a schedule by clicking on the “Add Schedule” button at the top of the page.

Once you click this link you'll be taken to a page where you can select the campaign that you would like to create a schedule for.

Simply select a campaign from the drop down list and click the “Add Schedule” button.

This will take you to another page where you can enter the details for a schedule.

First you'll need to specify a name and some details for this schedule entry, then you'll need to specify what times you'd like the campaign to run and what time you'd like it to stop.

The last thing you need to specify is how often you'd like this to run.

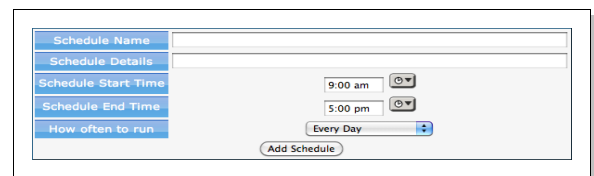
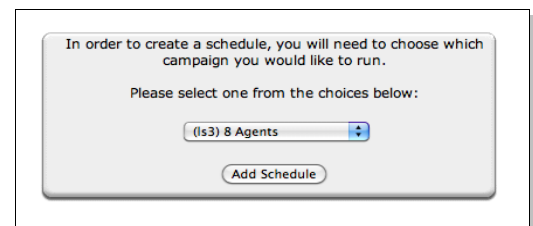
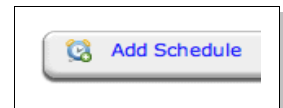
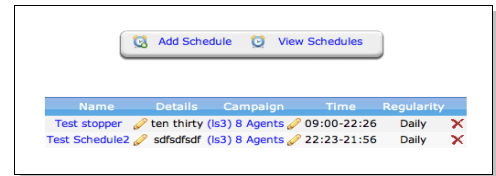
Edit Schedule

Editing a schedule is as simple as clicking on the pencil icon beside a schedule name.

This will take you to a screen which is the same as the add schedule page.

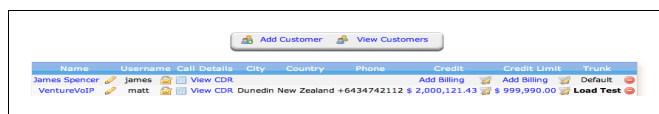
Delete Schedule

You can delete a schedule by clicking on the red delete button on the far right hand side of the page.



Customers

This is where you define anyone who has access to this SmoothTorque platform.



The screenshot shows a web interface with a button labeled 'Add Customer' and a table of customers. The table has columns for Name, Username, Call Details, City, Country, Phone, Credits, Credits Limit, and Trunk. Two customers are listed: James Spencer and VentureVoIP.

Name	Username	Call Details	City	Country	Phone	Credits	Credits Limit	Trunk
James Spencer	james	View CDR						
VentureVoIP	matt	View CDR	Dunedin	New Zealand	+6434742112	\$ 2,000,121.43	\$ 999,990.00	Default

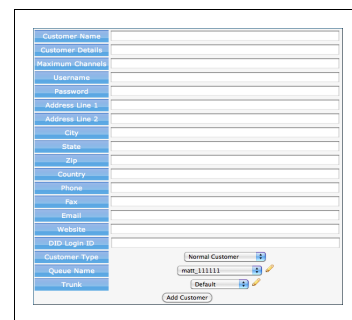
There are quite a few things that you can set up for each customer and we'll go through each of them here.

Add Customer

Whenever you want to give someone access to the system, you'll need to add a customer.

You can do this by clicking the “Add Customer” link at the top of the “Customers” page.

There are quite a lot of options you can fill out for a customer, but the only ones that are 100% necessary are the username and password.



The screenshot shows a form for adding a new customer. It includes fields for Customer Name, Username, Password, Address Line 1, Address Line 2, City, State, Zip, Country, Phone, Fax, Email, Mobile, DID Login ID, Customer Type (Normal Customer, Agent, Accounts Manager, Administrator), Queue Name, and Trunk. There are also buttons for 'Add Customer' and 'Load Test'.

Some of the more interesting options are provided at the end of the list. We'll go through a few of these.

Customer Type

This is a choice between 4 different types:

- Normal Customer – the default customer – does not have access to administrative privileges
- Agent – someone who will log on to the system and use it solely for making manual calls
- Accounts Manager – someone who logs in just to record the fact that funds have been added
- Administrator – someone with full access to the entire system

Queue Name

You can select a queue for a customer. This is a queue for agents to connect to if you are running the system in Queue mode rather than DID mode – normally a system would be run in DID mode.

For more information on the difference between these two modes see the description in the section: “Immediate Live”.

Trunk

With the trunk selection you would normally just have this set to “Default Trunk”. When the customer is set to use the default trunk, their trunk will change depending on which trunk you set for the default trunk for the system (see “Default Trunk”).

View Customers

Clicking on the “View Customers” link will return you to the first page you see when you click on the customers page.

Edit Customers

The edit customers page can be accessed by clicking on the pencil icon to the right of a customer's name.

The page is pretty much identical to the add customer page except that you have a new section at the bottom which allows you to give a customer access to Lead Lists.

The left hand list shows the lists that the customer currently has access to and the right hand side shows entries that the customer does not have access to.

In order to move entries from the “allowed side” to the “not allowed side”, just click once on the entry and click the “Remove -->” or “<-- Add” button.

The screenshot shows a form for editing a customer named 'VentureVoIP'. The form is divided into two main sections: 'Customer Details' and 'Assigned Lead Lists'. The 'Customer Details' section includes fields for Customer Name, Customer Details (A demonstration group which contains a single demo campaign), Maximum Channels (1001), Username (matt), Address Line 1 (156 Maitland Street), Address Line 2 (Kensington), City (Dunedin), State, Zip, Country (New Zealand), Phone (+6434742112), Fax (+6434742116), Email (matt@venturevoip.com), Website (http://www.venturevoip.com/st.php), DID Login ID (1234), Customer Type (Administrator), Queue Name (newtest), and Trunk (Load Test). The 'Assigned Lead Lists' section shows a 'Shared List 1' on the left and an empty list on the right, with buttons for 'Remove -->', '<-- Add', and 'Save Customer'.

Change Customer Password

In order to change the password for a customer you'll just need to click on the icon with the lock and pencil on it.



This will take you to a page when you can type in the new password and repeat it.

The screenshot shows a form for changing a password. It has two input fields: 'New Password' and 'Repeat'. Below the 'Repeat' field is a 'Save Password Change' button.

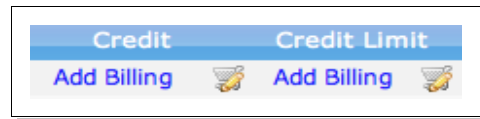
View Customer's CDR

In order to view the Call Detail Records (CDR) for a customer you can simply click on the “View CDR” link to the right of a customer's name.

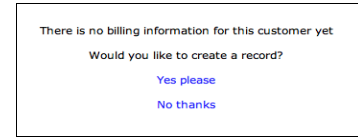
This will take you to a page where you can view the records for a customer in the same way you view records for yourself (see “Call Details”).

Add Billing Record

If you have enabled billing for the system you will be provided with a link to “Add Billing” to a customer's account.



It will first confirm that you'd like to add a billing record for this customer.



If you do, simply click “Yes please”.

This will take you to another page where you can specify how the customer should be billed.

AccountCode	stl-james
Price Per Minute	0.00000
First Period	1
Increment	1
Price Per Lead	0.00000
Price Per Connected Call	0.00000
Price Per Press 1	0.00000
Credit	0.0000000000
Credit Limit (0.00 for prepaid)	0.0000000000
Save Billing Information	

Let's go through these fields and explain them one at a time.

Price Per Minute

This is a charge for every minute of a connected call. How a minute is considered is based on the next two options.

First Period and Increment

These two fields go together really. In a normal phone call you'd be charged for one minute if the call was less than 60 seconds and then per second. This is called 60/1 billing.

To implement 60/1 billing you'd just select 60 for the first period and 1 for the increment.

If you wanted to charge for the first minute and then in 6 second blocks, you could do 60/6 billing by typing 60 for the first period and 6 for the increment.

Price Per Lead

This allows you to charge a customer for every call that is attempted no matter what the status.

Price Per Connected Call

This allows you to charge for leads, but only if the call is connected.

Price Per Press 1

This would normally be used if you wanted to charge someone a price for every “hot lead”.

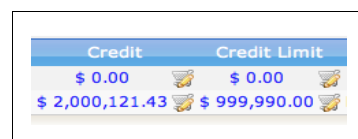
Credit

Here you can type how much credit the user has in their account at the moment.
Credit Limit

If you would like a customer to go below 0 (i.e. become a postpay customer), you can specify here how far below 0 they are allowed to go.

Edit Billing Record

Editing a billing record for a customer is basically the same as adding a billing record. You can either click on their credit or credit limit to edit the details.

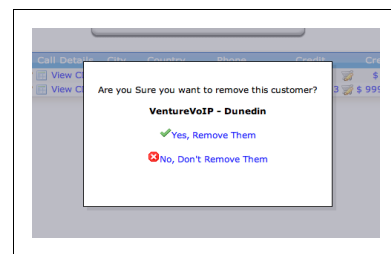


Credit	Credit Limit
\$ 0.00	\$ 0.00
\$ 2,000,121.43	\$ 999,990.00

Delete Customer

In order to delete a customer, you can just click on the delete button to the right of a customer (🗑️).

This will take you to a page where it will ask you to confirm that you would like to delete this customer.




Queues and Agents

One of the modes of operation of SmoothTorque is Queue mode.

This is really only recommended in small systems.

If however you are running a small system (i.e. a single voice node), and you're not needing the full 5 calls per second out of a machine, then read on, we'll explain exactly how you can set it up.



Name	Strategy	Timeout	Members
test	ringall	30	1
newtest			0
MOH			0
psc_test	ringall		1
PSTQueue	rrmemory		1
fooqueue	fewestcalls		1
Hack	rrmemory		1
matt_test	ringall		1
queueElian	rrmemory		0

Let's start out by going through the information you're shown on the queues page from the left to the right.

First off you have the name of the queue (and a pencil icon to edit it).

Next you have the “Add Agent” icon (👤). We'll go over this later.

After this you have the “View Agents” icon (👥). This is used to show the agents that a queue has in it.

You then have the strategy for the queue, the timeout and the number of members (agents).

The final link is for deleting a queue.

Queues

In a normal system a queue would be for incoming calls. That's how people traditionally look at them.

In SmoothTorque we use them to connect outgoing calls to.

The idea is the same, you have agents who are waiting for calls and SmoothTorque makes calls to try and keep as many of them possible busy at any time.

Whenever a call that SmoothTorque is going gets a call that it considers should go to an agent it does one of two things:

1. Send the call to a remote phone number
2. Send the call to a local queue

If you send the call to a remote phone number you need to tell SmoothTorque how many total agents there are available.

If you use a local queue, SmoothTorque will monitor it and find the numbers of agents available in real time, adjusting as people log in and out.

So, if you're going to use queues, the first thing you're going to need to do is create a queue.

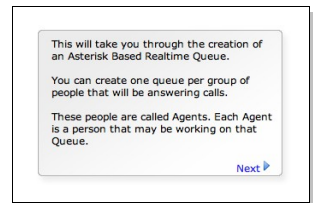
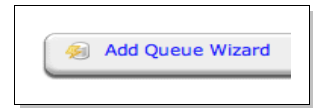
Adding A Queue

The easiest way to add a queue is to use the “Add Queue Wizard” link at the top of the page.

This will start by asking you a few questions about how you'd like to have the queue configured.

Just click the next button to begin the process.

There's full help available for each step.



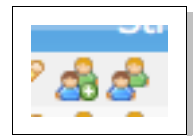
Deleting a Queue

In order to delete a queue, you will need to click on the delete button (🗑️) to the right of the queue name.

Agents

Agents are the people who will be receiving calls.

Agents will always be considered as members of queues.



Add Agent

In order to add an agent to a queue, you can click the little icon of people with a plus sign on it (👥+).

This will take you a page where you can create an account for an agent to use.

Note that you will need to have Asterisk™ set up so that it is looking at the MySQL database which SmoothTorque is writing to.

A form titled "Name" with fields for "Name:", "Password:", "Codec 1" (dropdown menu showing "G711 Ulaw"), and "Codec 2" (dropdown menu showing "G711 Ulaw"). There is a "Save Account" button at the bottom.

View Agents

This page is used to view the status of agents and delete them from the system.

You can do this by clicking the agents icon (👥) to the right of the queue name.

A table with three columns: "Name", "Last Seen", and "IP Address". The first row shows "matt22" and "Never". There is a delete icon (🗑️) to the right of the table.

Name	Last Seen	IP Address
matt22	Never	

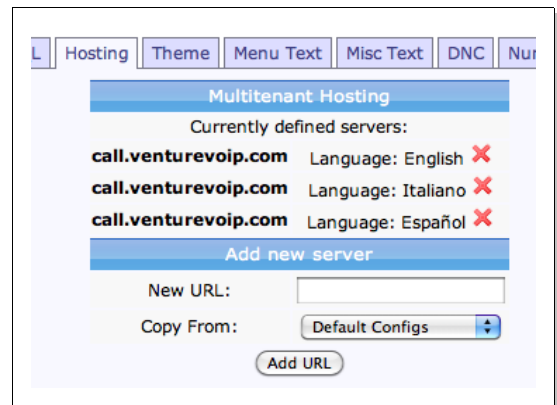
Multi Tenant Hosting

The SmoothTorque platform allows you to have multiple systems hosted using the same system.

This is configured in the “Hosting” page of the Administration section.

The way that it tells the difference between the systems is by the domain name that you type to access it.

For example you might have one machine, but a user can type `http://call.venturevoip.com` or `http://call2.venturevoip.com` to access it.



If both of these domain names go to the same machine then you can tell SmoothTorque to provide a different interface for each one.

Every configuration value in the system can be specified differently per host name.

Add New Server

In order to add a new server (domain name) to the system it's easiest to start with an existing configuration.

Because of this, it's important that you've got the system set up as you like before you copy these configs to a new server (you don't want to have to go through changing every option).

So, assuming you've got your current system up and going and working in the way you want, you can create a new server.

The way that you do this is to either copy from the default configs or copy it from an existing configuration.

Setting Up The New Server

The next thing you'll need to do is log out, and then go to the URL you just added and log back in.

Any changes you make while logged in to this new URL will apply only to that URL. For example, you can go in, change the logo, system name and the background colour and then log out and log back in with your original URL.

You'll notice that you now have different details depending on which URL you use to access the system.

Appendix A: Installing SmoothTorque

This appendix explains how to install and setup a SmoothTorque platform by yourself.

If you would like someone else to set the system up for you, please read the section “Appendix C: Remote install”.

If you're doing a new install of a system it really makes it easier if you use the free Debian Linux operating system available from <http://www.debian.org>

The installer script has been written to automatically install the system and has been tested with Debian 5.

While it is designed for Debian, Ubuntu is quite similar, although some of the instructions might not be exactly the same.



Download and run the installer

Note: If you are using a 64 bit operating system you will need to replace install.sh with install_64.sh in the steps below

```
wget http://www.venturevoip.com/install.sh
chmod +x ./install.sh
./install.sh
```

Edit the vg script

You will need to edit the vg script to add in your username and license key.

```
nano /SmoothTorque/vg
```

Change the username and license key values and press CTRL-x. It will ask you if you want to save your changes. Press y for yes.

The next thing you're going to want to do is create a MySQL account for Asterisk to log in to (replace CDRPASS with a password you'd like Asterisk to use):

```
mysql
grant ALL on SineDialer.cdr to 'cdr'@'%' identified by 'CDRPASS';
flush privileges;
quit
```

You will need to change MySQL to listen on 0.0.0.0 rather than 127.0.0.1. You can do this by editing `/etc/mysql/my.conf` and changing `bind-address` from 127.0.0.1 to 0.0.0.0

After you've done this you will need to restart MySQL by typing:

```
/etc/init.d/mysql restart
```

Set up automatic cron jobs

Ok, the next thing you'll need to do is set up a cronjob. This will copy any files that are uploaded to the web server to the Asterisk server(s).

It's a few steps:

Set up SSH no password

This is possibly outside the scope of this document, but the idea is that you want the web server to regularly rsync the uploads directory with `/var/lib/asterisk/sounds` on the Asterisk machines.

I've taken the instructions for this from http://linuxproblem.org/art_9.html

Let's call the apache server A and the Asterisk server B. So, on machine A you need to type:

```
cd ~
ssh-keygen -t rsa
```

Just press enter for all the prompts.

Next you need to create the `.ssh` directory on the Asterisk server (repeat for multiple servers and replace B with the ip address of the Asterisk machines):

```
ssh root@B mkdir -p .ssh
cat .ssh/id_rsa.pub | ssh root@B 'cat >> .ssh/authorized_keys'
```

While you're doing this you will need to enter passwords, but once you've done the last step above you should be able to SSH to the Asterisk machine from the apache machine without entering a password.

Set up the cron job

Okay, this one is pretty easy. Just type `crontab -e` and then add the following line to the bottom, replacing B with the IP address of your Asterisk machine - repeat for multiple machines. This should be all on one line.

```
* * * * * /usr/bin/rsync -rae 'ssh -p 22' /var/tmp/uploads/ B:/var/lib/asterisk/sounds/
```

Additional cronjobs

There are a few extra cronjobs you can run if you like. First is the billing. There are some files in the `cron/` directory inside the web site which you can use for this. If you are expecting heavy load, you can also set up a script to create a .png file from the statistics rather than generating it for every viewing - if you'd like to do this, get in touch with us.

Set up your Asterisk server

Steps to install Asterisk for SmoothTorque:

Install requirements for Asterisk

```
apt-get install subversion
apt-get install build-essential
apt-get install linux-headers-`uname -r`
apt-get install libncurses5-dev
apt-get install libmysqlclient15-dev
apt-get install rsync
```


Start setting up Asterisk

```
cd /usr/src/  
svn checkout http://svn.digium.com/svn/asterisk/branches/1.4 asterisk  
svn checkout http://svn.digium.com/svn/asterisk-addons/branches/1.4 asterisk-addons  
svn checkout http://svn.digium.com/svn/dahdi/linux-complete/trunk dahdi  
cd dahdi  
make && make install && make config  
cd ../asterisk  
./configure && make && make install && make samples  
cd ../asterisk-addons  
./configure && make && make install && make samples  
cd /etc/asterisk  
nano cdr_mysql.conf
```

Go to the bottom of the file and add the following (replacing MYSERVER with the IP address of your SmoothTorque server, CDRPASS with the password you created for CDR above)

```
[global]  
hostname=MYSERVER  
dbname=SineDialer  
table=cdr  
password=CDRPASS  
user=cdr  
port=3306  
;sock=/tmp/mysql.sock  
userfield=1
```

Ok, now we're going to set up the Asterisk manager access, you'll need to know the username and password you used for adding the server in the web interface above.

Start off by editing the file:

```
nano /etc/asterisk/manager.conf
```

First off you're going to need to enable it. Change "enabled=no" to "enabled=yes". Next scroll to the bottom of the file and add the following (replace MANAGERUSER and MANAGERPASS with the

details you used for the server)

```
[MANAGERUSER]
secret = MANAGERPASS
permit=0.0.0.0/0.0.0.0
writetimeout = 5000
read = system,call,log,verbose,command,agent,user
write = system,call,log,verbose,command,agent,user
```

The last thing you need to do is set up the dialplan for Asterisk. This is actually pretty simple.

```
cd /etc/asterisk
wget http://www.venturevoip.com/smoothtorque.conf
```

You'll need to include this into the default Asterisk configs by editing extensions.conf. There are two changes required - one to set the details for a load simulation and one to include the conf file.

```
nano /etc/asterisk/extensions.conf
```

Scroll down (using the arrow keys) till you see:

```
[globals]
CONSOLE=Console/dsp                ; Console interface for demo
```

Change this to:

```
[globals]
MULT = 10
PERCENTHUNGUP = 50
CONSOLE=Console/dsp                ; Console interface for demo
```

Lastly, scroll down to the bottom of the file and add the following line:

```
#include smoothtorque.conf
```

That's it, you've now got a basic set up (press ctrl x to exit and save it).

Start up Asterisk by typing the following

```
safe_asterisk
```

Set up and run the backend

Go back to your SmoothTorque machine and type the following

```
cd /SmoothTorque/  
screen ./vg
```

to disconnect press CTRL-a then press d

to reconnect type screen -x

Appendix B: Setting Up a VoIP Provider in Asterisk

While this is slightly outside the scope for this document I figured it would be a good idea to at least include some basic information.

Here's an example of something you might have in `/etc/asterisk/sip.conf`

```
[myprovider]
type=friend
username=myusername
secret=mypassword
host=xxx.xxx.xxx.xxx
qualify=yes
```

For more information on using Asterisk for SIP, have a look at the book: “Asterisk™ The Future of Telephony”.

You can buy or download a copy from <http://www.asteriskdocs.org>

Appendix C: Remote install

If you prefer, either your SmoothTorque reseller, or VentureVoIP can install and set up a system for you.

The only things you'll need to do are install Debian (just select base system), and then install OpenSSH and provide access details.

Installing Debian is pretty much a matter of just pressing enter for all of the default options except when it asks you what software you want to install.

Let's go through the pages one by one.

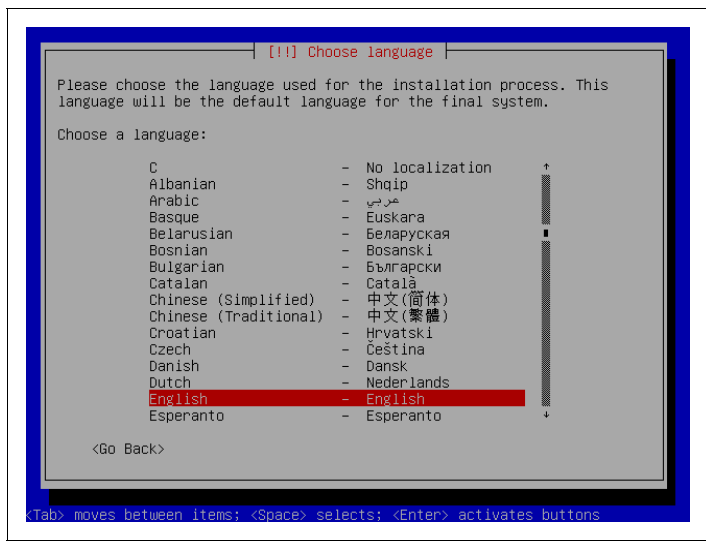
Installing Debian GNU/Linux

When you turn on the computer with the Debian boot CD in the drive you'll be presented with the following screen:

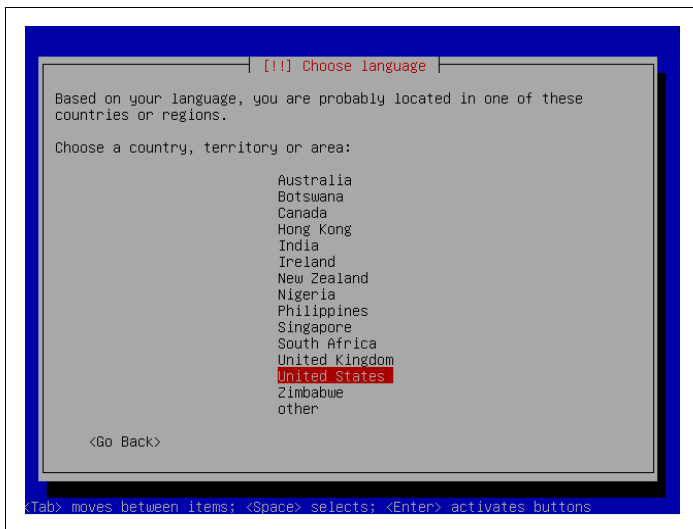


Just press enter – we'll use the normal install – even though it's not graphical, it's pretty easy to use.

You'll see a bit of text scroll by for a while then you'll see a screen asking you to select a language. Just press Enter to accept the default option unless you want to use the command line in different languages. The problem with doing this is that things we show you in examples will be different on your machine.

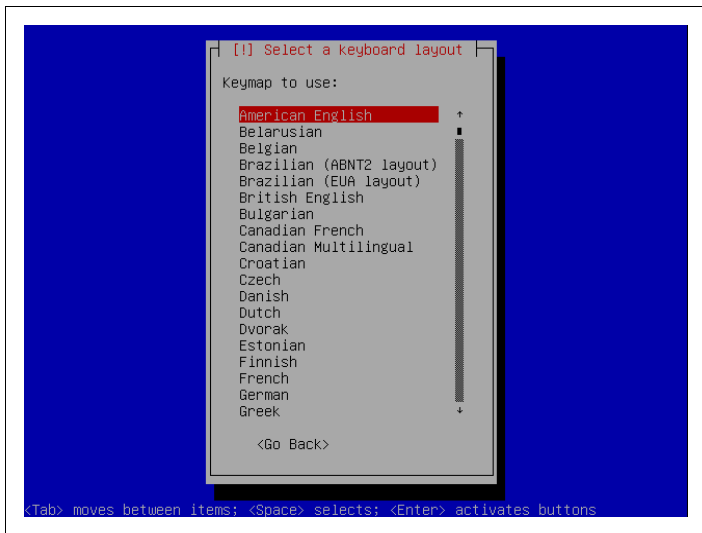


After this you'll be asked for your location based on your language. You should choose the correct place for you so that your timezone information is set correctly. Don't worry too much if this isn't done, because the person who logs into your machine to install the software can change the timezone for you.



Just press the Enter key when you're ready to go to the next page.

The next thing you'll need to do is tell the installer what kind of keyboard you're using.

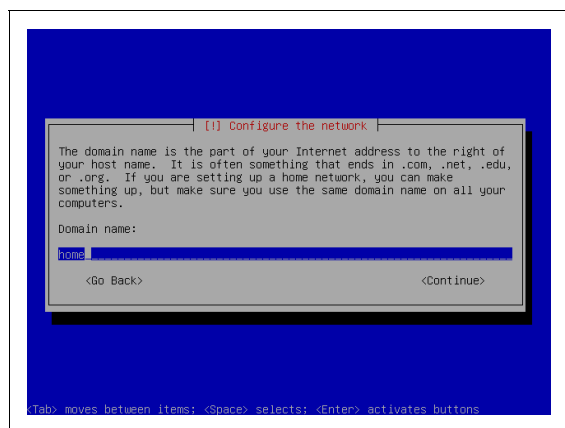
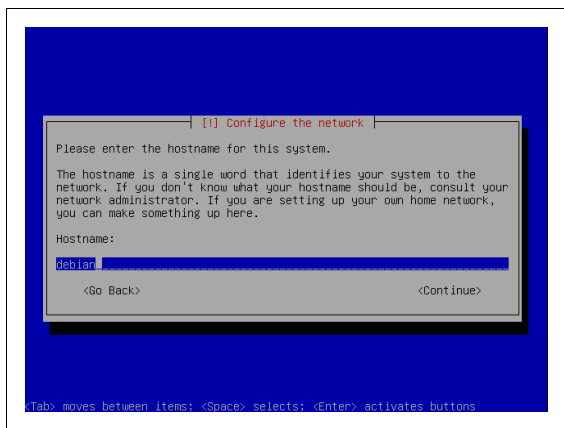


Once you've chosen one (using the arrow keys to move the red line up and down), press Enter to go to the next page.

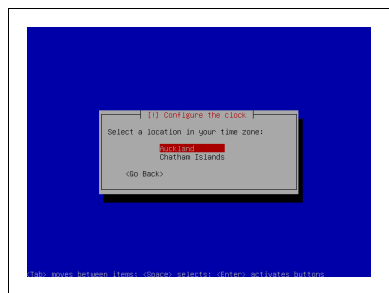
The installer will go around setting up various bits and pieces before returning to ask you for a host name and the domain name.

Just create a name for your system or use the default and press Enter.

If I accessed this system by call.venturevoip.com then the host name would be “call” and the domain name would be “venturevoip.com”.

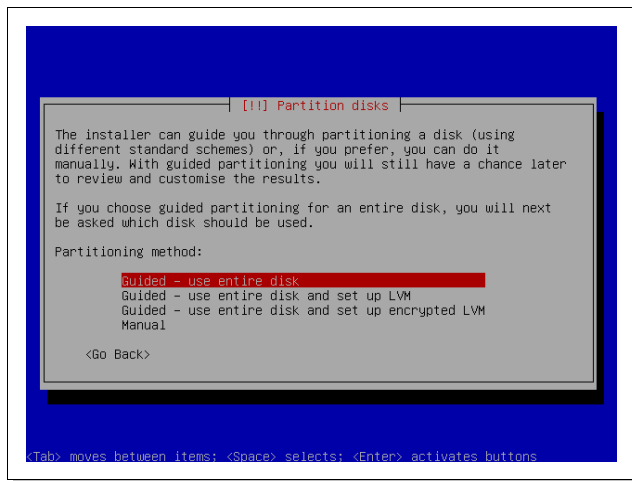


If the installer needs more information about your timezone it will ask it now – try to use the correct settings:



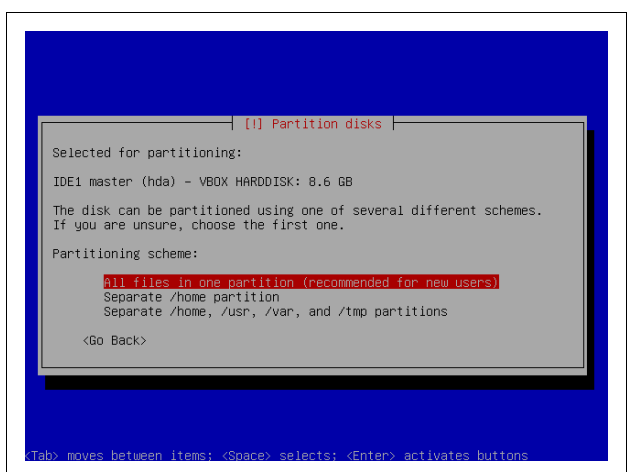
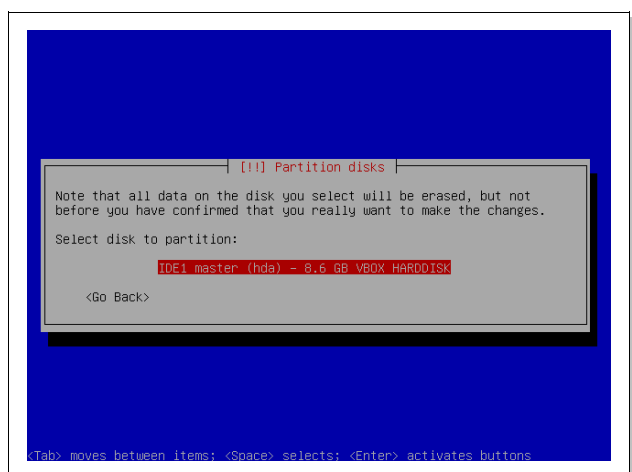
The next thing you need to do is select where you're going to install the operating system.

From here on you're going to have to be sure that you don't need anything that's already stored on the machine you are using.



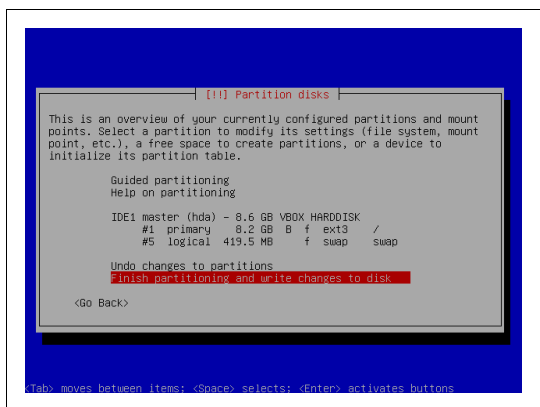
If you're sure about this, then just accept all of the default options. The next page will confirm that you are sure about doing this.

You'll then be asked about partitioning. Just select the default.



The next page will show you what it's about to do to the hard disk.

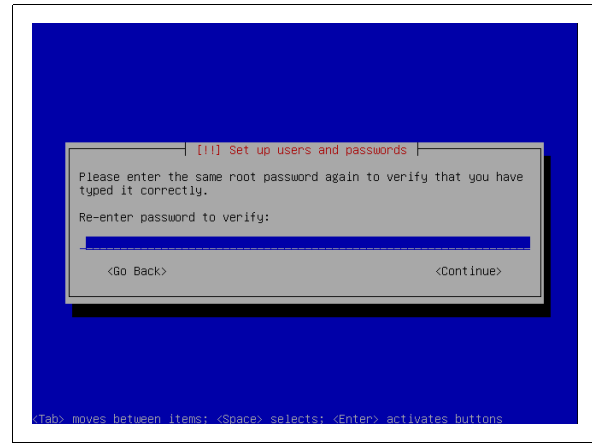
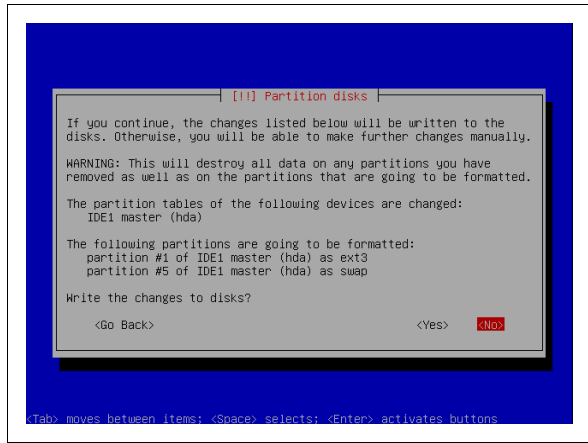
Just press Enter to proceed.



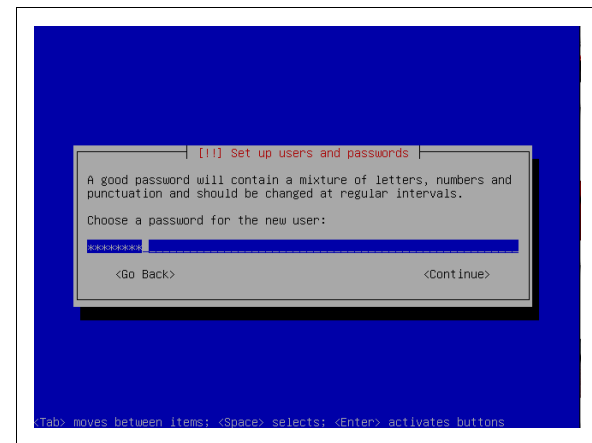
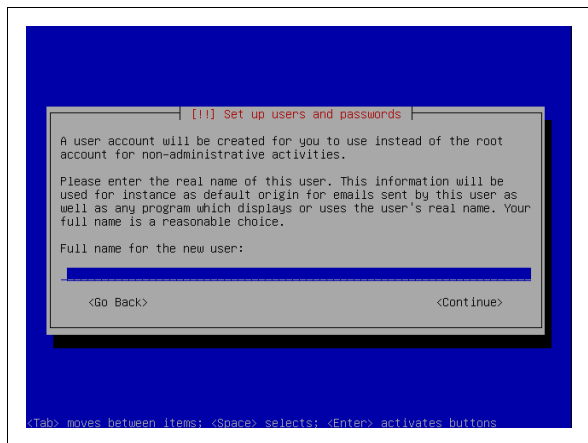
It will next ask you to confirm you really want to do this.

You'll need to press the left arrow to select "Yes" and then press Enter. Debian will then begin by downloading and installing the base system.

Once this has completed you'll be asked to provide a root password and then confirm it:



Next you can just follow through the steps for adding yourself a user:

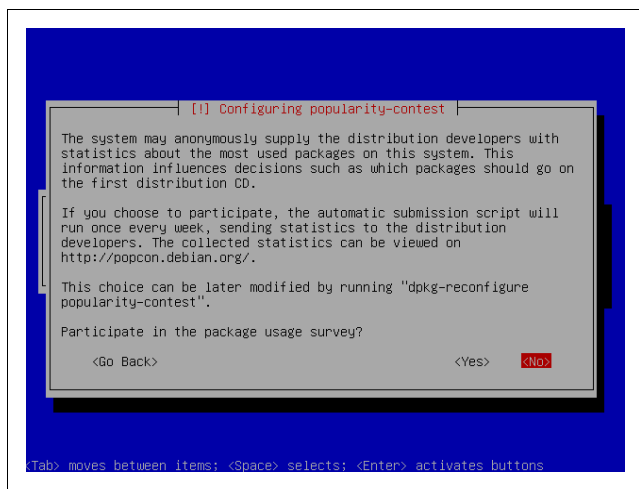


After this you'll be able to choose some servers which are close to you.



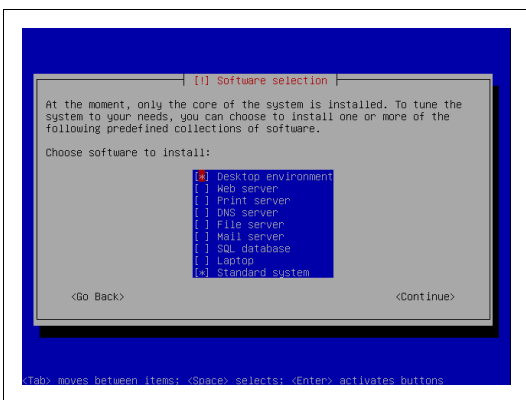
The software will then go off for a moment and setup apt.

Once the some of the software has been set up, it will ask you if you would like to participate in the package usage survey. Read the description, it's up to you whether you want to participate or not.



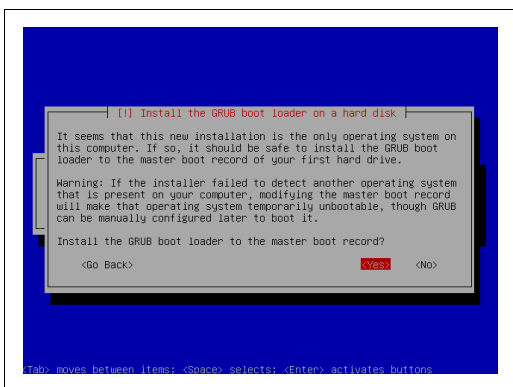
In this next screen it's quite important you pay attention. You'll definitely need to disable the “Desktop Environment”.

You can do this by pressing the space bar so that there is no asterisk in the box and leaving “Standard System” enabled.



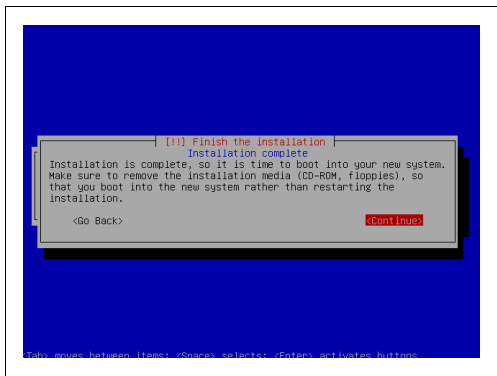
Press the “Tab” key to select <Continue> and press Enter.

It will then go off and install the base system for you. Depending on your network connection this will either be quick or slow :)



It will now ask you to confirm that you'd like the “Grub” boot loader installed. Just select the default option.

The final page that comes up tells you to remove the CD from the drive so that you don't end up going into the installation again.



Once you've done this and pressed Enter to continue, it will restart the machine with Debian installed.

It will ask you for login details. Use root as the username and type the password you used for root.

Once you've logged in you will need to type one final thing before someone else can log in to the machine remotely:

```
Starting periodic command schedu
Debian GNU/Linux 5.0 debian tty1
debian login: _
```

```
apt-get install -y openssh-server
```

That's it! You've installed the Linux system, and now someone else can log in and continue setting up your system for you if you provide them with access details.

You can type “exit” and press enter to log out or hold down the “Ctrl” key and press the “d” key.