Newfies-Dialer Documentation

Release 1.0/RC3

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Release 1.0

Date November 18, 2011

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CHAPTER

ONE

GETTING STARTED

Contents:

1.1 Introduction

Web http://www.newfies-dialer.org/

Download http://www.newfies-dialer.org/download/

Source https://github.com/Star2Billing/newfies-dialer/

Keywords dialer, voip, freeswitch, django, asynchronous, rabbitmq, redis, python, distributed

Newfies is an open source VoIP Dialer based on distributed message passing. It has been built to support cloud based servers and can also work on standalone servers. It uses Freeswitch (VoIP Server) to outbound calls, but support for other VoIP Servers such as Asterisk could be easily added in the future. The platform is focused on real-time operations and task call distributions to clustered brokers and workers.

Newfies-Dialer is written in Python, using the Django Framework. It also operates with message brokers such as RabbitMQ, Redis but support for Beanstalk, MongoDB, CouchDB and DBMS is also available.

Newfies-Dialer provides an extensive set of APIs to easily integrate with third-party applications.

Using very simple steps, Newfies-Dialer will help you create campaigns, add phonebooks, contacts, build audio messages and create complex telephony applications. Once your campaigns are ready to start, your messages will be dispatched and delivered.

- Overview
- Utility
- Features
- Architecture
- Latest documentation

1.1.1 Overview

Newfies-Dialer can be installed and used by anyone who has a need for mass outbound calling, voice broadcasting or providing outbound IVR. Some of the potential uses for Newfies-Dialer are listed below.

The system may be installed and used by either companies who wish to make calls on their own behalf, or by SaaS (Software as a Service) companies that want to provide bulk dialling facilities to their own customers.

1.1.2 Utility

Newfies-Dialer is loaded up with a list of telephone numbers that can be dialled sequentially at very high rates of calling depending on carrier capacity and hardware, potentially delivering many millions of calls per day.

When the called party answers the call, Newfies-Dialer passes the call to a telephony application that is custom designed to provide the desired behaviour.

Below are examples of some of the uses for Newfies-Dialer

- Telecasting: Broadcast marketing or informational messages to customers and clients.
- Telemarketing: Broadcast a marketing message to potential customers, and give them the option to be put through to a call-centre via an IVR (Interactive Voice Response) Menu.
- Phone Polling, Surveys and Voting: Ring large numbers of people and present IVR options for either polling their opinions, interactive surveys, or taking their vote and record the results.
- Debt Control: Customers can be automatically reminded at intervals that they owe money, and an IVR menu presented to talk to the finance department or passed to a credit card capture IVR to pay over the phone.
- Appointment reminders: Doctors, Dentists, and other organisations that make appointments for their clients can integrate Newfies-Dialer into their appointment systems to pass a message reminding them of an upcoming appointment.
- Dissemination of information via phone: Newfies-Dialer was originally designed to call large numbers of people and disseminate medical and health advice via the ubiquitous cellphone in 3rd world countries where often, literacy levels are low. On a local scale, it can be used to disseminate information about forthcoming community events.
- Mass Emergency broadcast: Where there is a necessity to warn large numbers of people in a short space of time, such as weather warnings.
- Voice Conferencing: Attendees for a voice conference or podcast can be dialled up from a central location, and be connected in an audio conference room.
- Subscription Reminders and Renewals: Where a company sells an annual subscription for a product or service, Newfies-Dialer can be configured to dial the customer, remind them that the subscription is due, and optionally pass the call into a call centre or into a credit card payment IVR.

1.1.3 Features

Tele-	Based on leading open source Freeswitch, Asterisk
phony	
PBX	
Dis-	Runs on one or more machines. Supports broker <i>clustering</i> and <i>HA</i> when used in
tributed	combination with <i>RabbitMQ</i> . You can set up new workers without central configuration
	(e.g. use your grandma's laptop to help if the queue is temporarily congested).
Concur-	Throttle Concurrent Calls
rency	
Schedul-	Supports recurring tasks like cron, or specifying an exact date or countdown for when the
ing	task should be executed. Can re-try to the non connected numbers at a later time
IVR	Accommodates multiple IVR scripts with options to connect the user to some other
support	IVR/phone number on pressing a key
Web In-	Newfies can be managed via a Web interface. Realtime web-based reports for call details
terface	and current calls. You can query status and results via URLs, enabling the ability to poll
	task status using Ajax.
Error	Can be configured to send emails to the administrator if a tasks fails.
Emails	
Import	Import contact details from a .csv file
Contact	

1.1.4 Architecture



- User selects contacts, phonebooks and campaigns, then chooses a voice application to use. The campaign is then launched
- Newfies-Dialer spools the outbound calls to FreeSWITCH via Plivo.
- Plivo sends the dial request to FreeSWITCH using the event socket.
- FreeSWITCH dials the contact via the configured telephony gateways.
- Contact picks up the call, and the answer event is received in FreeSWITCH and passed back to Plivo.
- Newfies-Dialer is notified that the call is answered, then renders & relays RestXML to Plivo.
- Plivo interprets RestXML and sends the application call-flow commands to FreeSWITCH.
- The voice application is delivered to the contact by FreeSWITCH.

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1.1.5 Latest documentation

The latest documentation with user guides, tutorials and API reference is hosted at "Readthedocs".

INSTALLATION

Contents:

2.1 Installation overview

2.1.1 Install requirements

A Requirements file gives you a way to create an environment where you can put all optional dependencies which are needed for your Project/Application.

To get started with Newfies-Dialer you must have the following installed:

- python >= 2.4 (programming language)
- Apache / http server with WSGI modules
- Django Framework >= 1.3 (Python based Web framework)
- Celery >= 2.2 (Asynchronous task queue/job queue based on distributed message passing)
- MySQL-python >= 1.2.3 (MySQL for python language)
- Werkzeug >= 0.6.2 (Collection of various utilities for WSGI applications)
- amqplib >= 0.6.1 (Client library for AMQP)
- anyjson >= 0.3 (Loads the fastest JSON module)
- django-celery >= 2.2.4 (Celery integration for Django)
- django-extensions >= 0.6 (Collection of global custom management extensions for Django)
- django-jsonfield >= 0.6 (Reusable django field that can use inside models)
- django-pagination >= 1.0.7 (Utilities for creating robust pagination tools throughout a django application)
- django-picklefield >= 0.1.9 (Implementation of a pickled object field)
- django-threaded-multihost >= 1.4-0 (Provides multi-host utilities to Django projects)
- django-urlauth = 0.1.1 (Allows to build links with authentication effect)
- django-uuidfield >= 0.2 (Provides a UUIDField for your Django models)
- django-reusableapps >= 0.1.1 (Python module to enable Django to load reusable, pluggable and egg-based applications)
- docutils >= 0.7 (Text processing system for processing plaintext documentation into useful formats)

- importlib >= 1.0.2 (Implementation of the *import* statement)
- kombu >= 1.0.2 (An AMQP Advanced Message Queuing Protocol messaging framework for Python)
- pyparsing >= 1.5.5 (A general parsing module for Python)
- python-dateutil >= 1.5 (Extensions to the standard datetime module)
- redis >= 2.2.2 (Redis Python Client)
- simple son >= 2.1.3 (Simple, fast, complete, correct and extensible JSON)
- uuid >= 1.30 (UUID object and generation functions)
- wsgiref >= 0.1.2 (Validation support for WSGI)
- switch2bill-common (Common library that are reused by Star2Billing)
- simu-prefix-country (Provide Prefix and Country information)
- django-tastypie (Creating delicious APIs for Django)
- BeautifulSoup >= 3.2.0 (HTML parser optimized for screen-scraping)
- Pygments >= 1.4 (A generic syntax highlighter)
- django-admin-tools (Collection of tools for the django administration)
- python-memcached >= 1.47 (Python based API for communicating with the memcached distributed memory object cache daemon)
- django-memcache-status >= 1.0.1 (Displays statistics about memcached instances)
- django-notification >= 0.1.3 (User notification management for the Django web framework)
- identicon (identicon python implementation)
- django-sentry >= 1.8.6.2 (Real-time logging / error tracing for Django)
- django-qsstats \geq 0.3.1 (A django microframework that eases the generation of aggregate data for querysets)

Use PIP to install all the requirements,:

```
$ pip install -r requirements.txt
```

2.1.2 Installation Script

You can install Newfies-Dialer manually or using the shell script provided.

To install Newfies-Dialer using the script,:

```
$ chmod +x install/install-newfies.sh
$ ./install/install-newfies.sh
$ chmod +x install/install-celery.sh
$ ./install/install-celery.sh
```

2.1.3 Running a Newfies-Dialer

Inside Newfies-Dialer directory you should run:

```
$ mkdir database
$ python manage.py syncdb
$ python manage.py collectstatic
$ python manage.py runserver
```

syncdb will create a database named test.db in database folder of the Newfies-Dialer directory. We have configured Newfies-Dialer to do this, but you can change this simply by modifying settings.py where DATABASES dictionary is constructed. You can find more information about this in the Django documentation.

collectstatic will fetch all necessary media files and put them into static folder defined in the settings module.

runserver runs an embedded webserver to test your site. By default it will run on http://localhost:8000. This is configurable and more information can be found on runserver in Django documentation.

2.1.4 Caching System

When a User requests a page, the Web server makes calculations for business logic and to create the page that your visitor sees. It creates a processing overhead higher than a standard read-a-file-off-the-filesystem server arrangement.

This is where caching comes in.

To cache something is to save the result of an expensive calculation so that you don't have to perform the calculation next time.

```
$ mkdir /usr/share/django_cache
```

2.2 Broker Installation

This document describes the installation of two different Brokers. One is Redis and second is Rabbitmq. You can install either to work with Newfies-Dialer.

2.2.1 Redis

Download Source

Download: redis-server_2.0.0~rc2-1_amd64.deb.

To install Redis-Server

```
$ sudo dpkg -i redis-server_2.0.0~rc2-1_amd64.deb
or you can use apt-get
$ apt-get install redis-server
```

2.2. Broker Installation 9

Running Server

\$ redis-server

2.2.2 Rabbitmg

RabbitMQ is a complex and sophisticated product. If you don't need this level of robustness, then you might want to take a look at Redis - it installs easily, runs relatively lean, and can be monitored and maintained without a lot of fuss.

See Installing RabbitMQ over at RabbitMQ's website.

Note: If you're getting *nodedown* errors after installing and using **rabbitmqctl** then this blog post can help you identify the source of the problem:

http://somic.org/2009/02/19/on-rabbitmqctl-and-badrpcnodedown/

Download Source

http://www.rabbitmq.com/server.html

Debian APT repository

To make use of the RabbitMQ APT repository,

1. Add the following line to your /etc/apt/sources.list

deb http://www.rabbitmq.com/debian/ testing main

Note: The word **testing** in the above line refers to the state of the release of RabbitMQ, not any particular Debian distribution. You can use it with Debian stable, testing or unstable, as well as with Ubuntu. In the future there will be a stable release of RabbitMQ in the repository.

- 2. (optional) To avoid warnings about unsigned packages, add RabbitMQ's public key to your trusted key list using apt-key(8)
- \$ wget http://www.rabbitmq.com/rabbitmq-signing-key-public.asc
- \$ sudo apt-key add rabbitmq-signing-key-public.asc
 - 3. Run apt-get update.
- 4. Install packages as usual; for instance,
- \$ sudo apt-get install rabbitmq-server

Setting up RabbitMQ

To use celery we need to create a RabbitMQ user, a virtual host and allow that user access to that virtual host:

```
$ rabbitmqctl add_user myuser mypassword
$ rabbitmqctl add_vhost myvhost
$ rabbitmqctl set_permissions -p myvhost myuser ".*" ".*"
```

See the RabbitMQ Admin Guide for more information about access control.

Starting/Stopping the RabbitMQ server

To start the server:

```
$ sudo rabbitmq-server
```

you can also run it in the background by adding the -detached option (note: only one dash):

```
$ sudo rabbitmq-server -detached
```

Never use **kill** to stop the RabbitMQ server, but rather use the **rabbitmqctl** command:

```
$ sudo rabbitmqctl stop
```

When the server is running, you can continue reading Setting up RabbitMQ.

2.3 Celery Installation

2.3.1 Celery

Celery is an asynchronous task queue/job queue based on distributed message passing. It is focused on real-time operation, but supports scheduling as well.

You can install Celery either via the Python Package Index (PyPI) or from source.

To install using pip

```
$ pip install Celery
```

To install using easy install

```
$ easy_install Celery
```

Downloading and installing from source

To Download the latest version click here.

You can install it by doing the following:

```
$ tar xvfz celery-0.0.0.tar.gz
$ cd celery-0.0.0
$ python setup.py build
```

\$ python setup.py install # as root

Using the development version

You can clone the repository by doing the following:

\$ git clone git://github.com/ask/celery.git

CHAPTER

THREE

USER GUIDE

Contents:

3.1 Overview

Newfies-Dialer is an open source VoIP Dialer based on distributed message passing. It has been built to support cloud servers and also works on standalone servers. It uses Freeswitch (VoIP Server) to outbound calls, but support for other VoIP Servers such as Asterisk could be easily added in the future. The platform is focused on real-time operations and task call distributions to clustered brokers and workers.

Newfies-Dialer is a computerised system that automatically dials a group of telephone numbers for connection to assigned campaigns.

Features:

- \star Restful-API based to easily integrate the platform dialer with third-party applications
- * Web-based administrative/customer interfaces
- * Lower operating costs
- \star Calls are made through Internet VoIP. No need for telephony hardware
- * Call reports and Statistics

3.2 How to use Newfies-Dialer

3.2.1 Freeswitch Set-Up

Configure trunks and gateways in Freeswitch by creating an XML file in /usr/local/freeswitch/conf/sip_profiles/external/ and give it an identifiable name, e.g. call-labs.xml, and place the following lines in the file, edited to suit your provider:

```
<include>
<gateway name="ip address or hostname of carrier">
<!--/// account username *required* ///-->
<param name="username" value="your username provided by carrier"/>
<!--/// auth realm: *optional* same as gateway name, if blank ///-->
<!--<param name="realm" value="asterlink.com"/>-->
<!--// username to use in from: *optional* same as username, if blank ///-->
<param name="from-user" value="your username provided by carrier"/>
<!--/// domain to use in from: *optional* same as realm, if blank ///-->
<!--param name="from-domain" value=""/-->
<!--/// account password *required* ///-->
```

```
<param name="password" value="your password supplied by carrier"/>
<!--// extension for inbound calls: *optional* same as username, if blank ///-->
<!--<param name="extension" value="cluecon"/>-->
<!--// proxy host: *optional* same as realm, if blank ///-->
<!--<param name="proxy" value="asterlink.com"/>-->
<!--// send register to this proxy: *optional* same as proxy, if blank ///-->
<!--<param name="register-proxy" value="mysbc.com"/>-->
<!--// expire in seconds: *optional* 3600, if blank ///-->
<!--<param name="expire-seconds" value="60"/>-->
<!--/// do not register ///-->
<param name="register" value="true"/>
<!-- which transport to use for register -->
<!--<param name="register-transport" value="udp"/>-->
<!--How many seconds before a retry when a failure or timeout occurs -->
<!--<param name="retry-seconds" value="30"/>-->
<!--Use the callerid of an inbound call in the from field on outbound calls via this gateway -->
<!--<param name="caller-id-in-from" value="false"/>-->
<!--extra sip params to send in the contact-->
<!--<param name="contact-params" value="tport=tcp"/>-->
<!--send an options ping every x seconds, failure will unregister and/or mark it down-->
<!--<param name="ping" value="25"/>-->
</gateway>
</include>
```

Then in the Freeswitch CLI (fs_cli) "sofia profile external restart reloadxml". When the command is complete, check the gateway has registered with the command "sofia status".

3.2.2 Create Gateway

Having created the gateway in Freeswitch, Newfies-Dialer has to be told that it can use it. In admin, add a new dialer gateway, e.g. sofia/gateway/myprovider/ (The final / is important) where "myprovider" is the gateway name setting used in above xml file in Freeswitch.

Only the fields in bold are compulsory.

3.2.3 Dialer Settings

Dialer settings are mapped with system users who are going to create campaigns & contacts. If dialer settings are not mapped to users, notifications & emails are sent to super admin user.

To create restrictions (like the Max. no of campaign, Max no of contacts etc.) for system User, Click on Add dialer settings. Add numeric values for the limit.

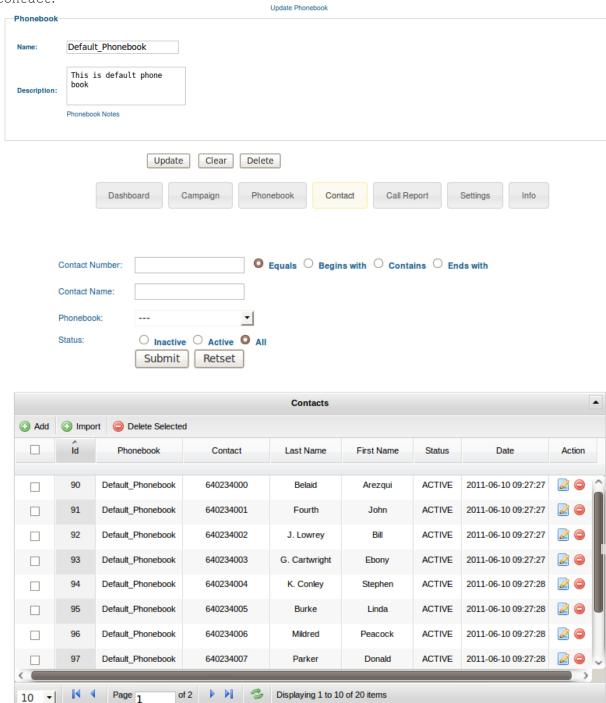
To apply the dialer settings limit on a system user, click on Customers or Admins in admin UI, select the user to update, & apply the settings from the dialer settings list.

3.2.4 Create Voice Application

A number of voice applications are provided with Newfies-Dialer. Click Add VoIP App give the voice application a name, select the type of application from the dropdown, select the gateway to use if the call is to be redirected, and provide the data to be used, e.g. in the case of "Speak" this would be the words to convert to text to speech.

3.2.5 Create call list

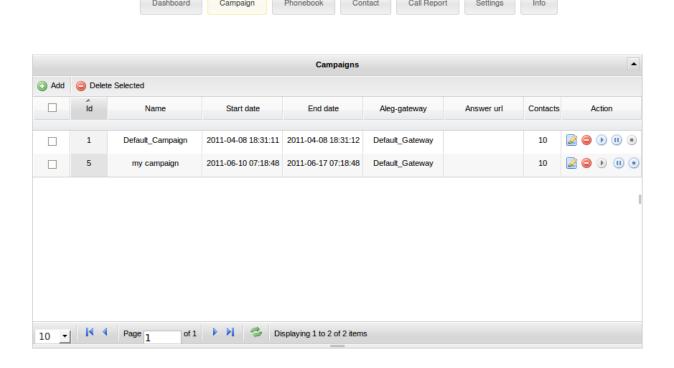
To create a call list, click on Add in Phonebook list, add name of phonebook & its description. Click on Contacts and add phone numbers in the contact list. You can also import your call list from csv files, via clicking on Import contact.

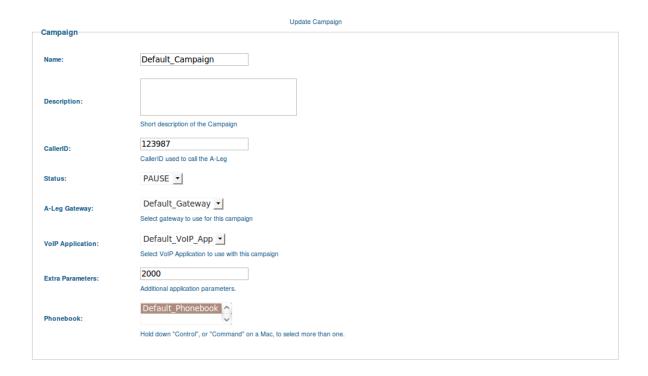


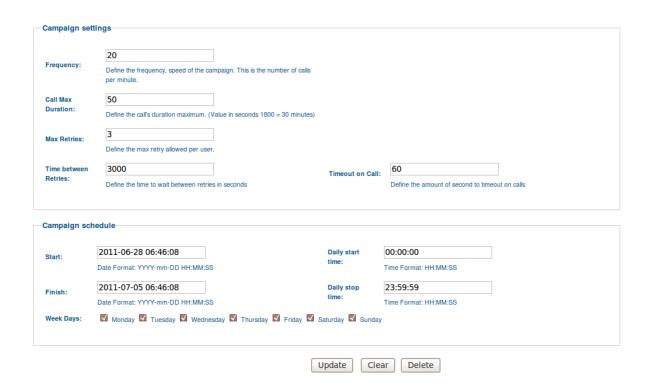


3.2.6 Create campaign

To create a campaign, click on Add in campaign list, add details for the campaign. Important: Add the campaign's start and end dates with times & week-day exceptions. Select the gateway through which calls will be routed & the phonebook(s) linked with the contacts.





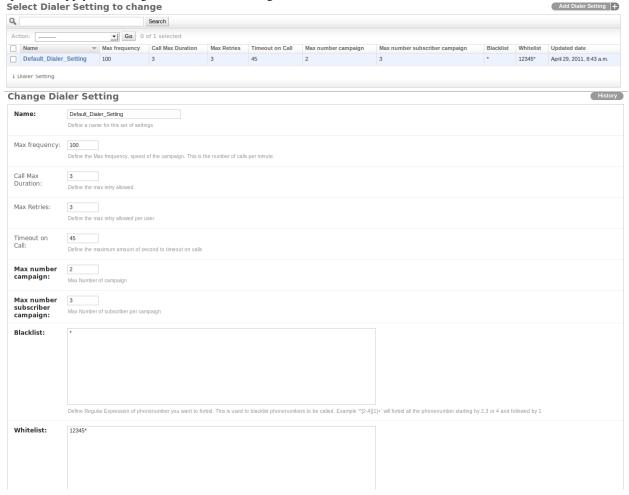


3.2.7 Dialer Settings

Dialer settings has to be mapped with system users who are going to create campaigns & contacts. If dialer setting is not mapped with system users, notification & mail has been sent to Super admin user.

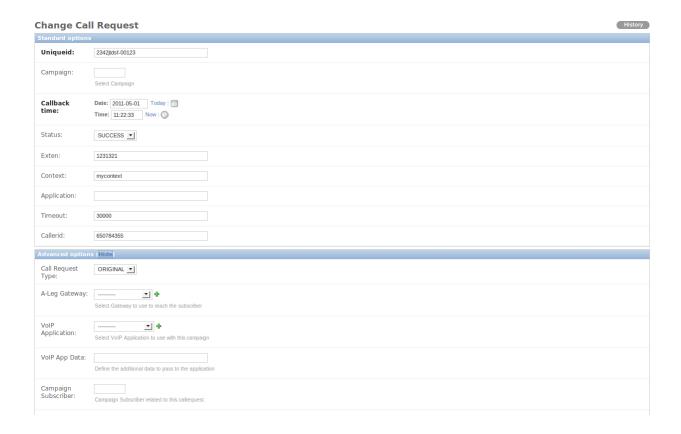
To create restrictions (like the Max. no of campaign, Max no of contacts etc.) for system User, Click on Add in dialer settings list of admin side. Add numeric values for the limit.

To apply the dialer settings limit on a system user, click on Customers or Admins in admin UI, select the user to update, & apply the settings from the dialer settings list.



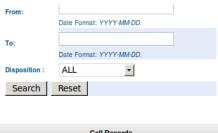
3.2.8 Reach to contacts/subscribers

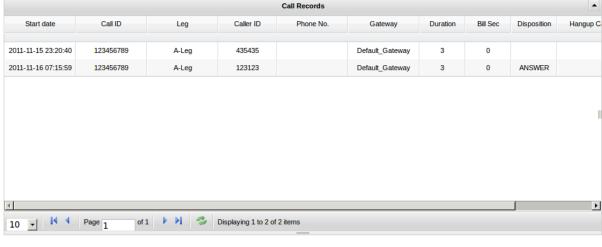
A call-request will spool a call directly from the platform using a dialer gateway and update the call-request status after receiving a response from the gateway.



3.2.9 VoIP Call Report

As per the status of a call-request, it will be stored in the VoIP call records. This gives information of all the calls & call statistics made with the call-request and also you can search for records on the basis of date range. You can export the VoIP call report into a csv file.







3.2.10 Settings

The settings page provides a number of functions:-

Account - Change the detail of the account. Password - Change the password. Notifications - Display system notifications. Limitation - Displays the parameters of the dialer settings. Authorized - Facitiy to check that a number is not blacklisted.

3.3 Admin Panel

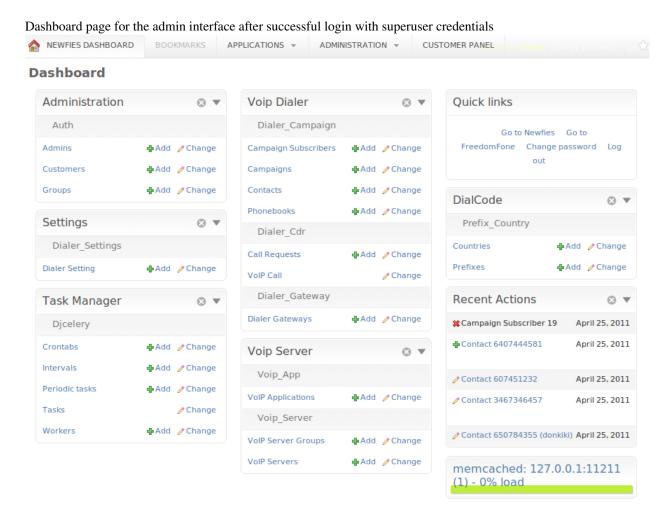
http://localhost:8000/admin/

This interface provides user (ACL) management, full control of all Campaigns, Phonebooks, Subscribers, Gateways and configuration of the Audio Application.

· Screenshot with Features

3.3.1 Screenshot with Features

Dashboard



Phonebook

The phonebook list will be displayed from the following URL. You can add a new phonebook by clicking Add phonebook and adding the name of the phonebook and its description, Also from the phonebook list, click on the phonebook that you want to update.

URL:

• http://localhost:8000/admin/dialer_campaign/phonebook/

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To Add/Update phonebook for a user

URL:

- http://localhost:8000/admin/dialer_campaign/phonebook/add/
- http://localhost:8000/admin/dialer_campaign/phonebook/1/



Contact

The contact list will be displayed from the following URL and you can add a new contact by clicking Add contact & adding the contact details (i.e. phone number, name, description about contact, contact status) to one phonebook from the phonebook list.

If the contact is active and the linked phonebook is also attached to a running campaign, then the contact will be added into campaign subscribers.

From the contact list, click on the contact that you want to update.

URL:

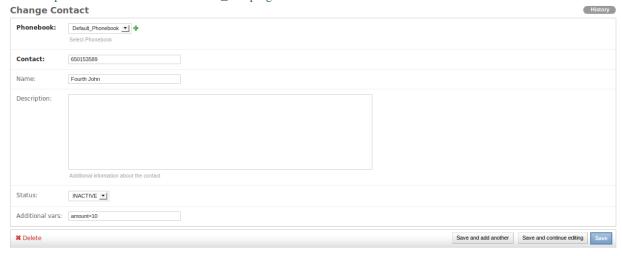
http://localhost:8000/admin/dialer_campaign/contact/



To Add/Update a contact

URL:

- http://localhost:8000/admin/dialer_campaign/contact/add/
- http://localhost:8000/admin/dialer_campaign/contact/1/



To import bulk contacts into a phonebook, click on Import contacts. where you can upload the contacts via a CSV file in to one phonebook.

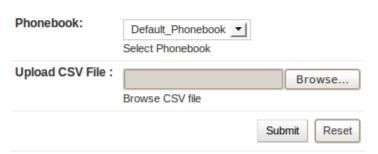
URL:

• http://localhost:8000/admin/dialer_campaign/contact/import_contact/

Import Contact

Sample File last name email-id additional vars contact first name description status 1234 Belaid Arezqui areski@gmail.com test subscriber 1 test 0 5678 Fourth John john@gmail.com test subscriber test

CONTACT STATUS = ('1'-'ACTIVE') ('0'-'INACTIVE')



Campaign

The campaign list will be displayed from the following URL. You can add a new campaign by clicking Add campaign. While adding a campaign, it is important to add campaign's start and end dates with time & week-day exceptions. Also select the gateway through which calls will be routed & the phonebook(s) linked with contacts.

3.3. Admin Panel 23

From the campaign list, click on the campaign that you want to update.

URL:

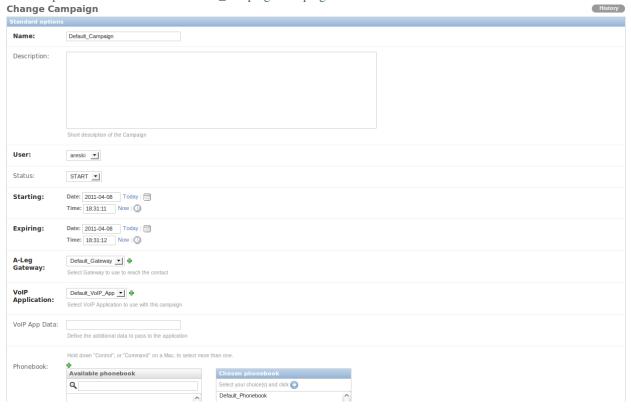
• http://localhost:8000/admin/dialer_campaign/campaign/



To Add/Update Campaign for user

URL:

- http://localhost:8000/admin/dialer_campaign/campaign/add/
- http://localhost:8000/admin/dialer_campaign/campaign/1/



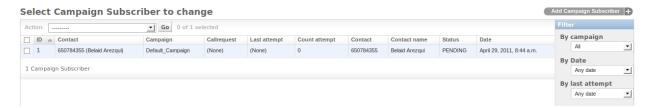
Campaign Subscriber

The Campaign Subscriber list will be displayed from the following URL. You can add a new campaign subscriber by clicking Add Campaign Subscriber. Also from the campaign subscriber list, click on the subscriber to update.

While creating a contact, if its linked phonebook is also attached to a running campaign, then the contact will be added into the campaign subscriber.

URL:

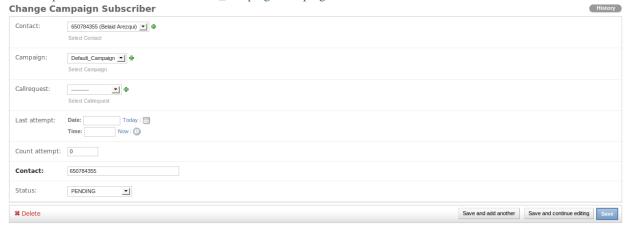
• http://localhost:8000/admin/dialer_campaign/campaignsubscriber/



To Add/Update Campaign Subscriber

URL:

- http://localhost:8000/admin/dialer_campaign/campaignsubscriber/add/
- http://localhost:8000/admin/dialer_campaign/campaignsubscriber/1/



Dialer Settings

The dialer settings list will be displayed from the following URL. The Dialer settings list is applied to a system User. You can add a new setting by clicking Add Dialer Settings and add numeric values for the limit. Also from the dialer settings list, click on the setting to update.

URL:

• http://localhost:8000/admin/dialer_settings/dialersetting/

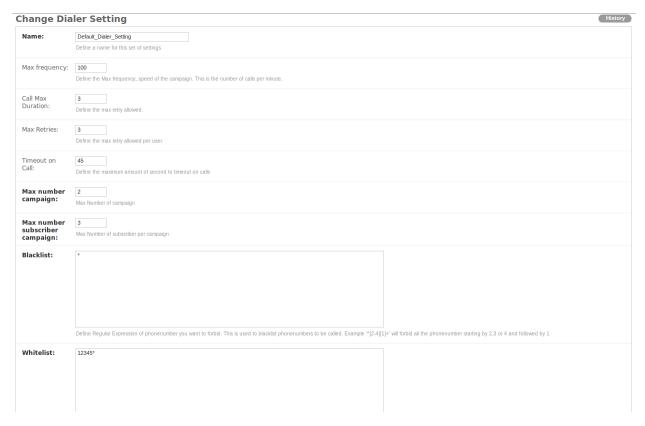


To Add/Update dialer settings for a Newfies-Dialer user

URL:

- http://localhost:8000/admin/dialer_settings/dialersetting/add/
- http://localhost:8000/admin/dialer_settings/dialersetting/1/

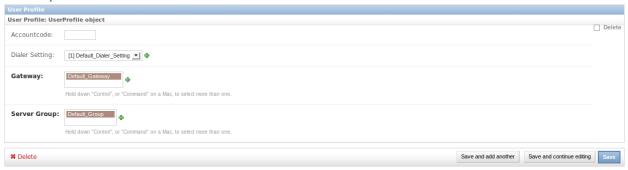
3.3. Admin Panel 25



To apply dialer settings limit to a User, click on Customers or Admins, select the user to be updated & apply settings from the dialer settings list.

URL:

http://localhost:8000/admin/auth/staff/1/



Dialer Gateway

The Dialer Gateway list will be displayed from the following URL. You can add a new gateway by clicking Add Dialer Gateway and adding the details (e.g. gateway name, hostname, protocol etc.). Also from the gateway list, click on the gateway that you want to update.

URL:

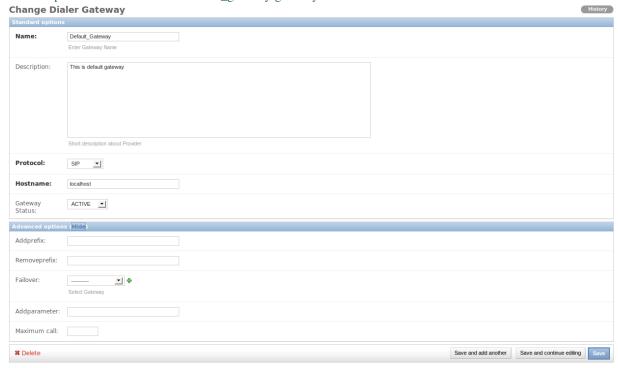
• http://localhost:8000/admin/dialer_gateway/gateway/



To Add/Update a dialer gateway

URL:

- http://localhost:8000/admin/dialer_gateway/gateway/add/
- http://localhost:8000/admin/dialer_gateway/gateway/1/



VoIP Application

The VoIP application list will be displayed from the following URL. You can add a new application by clicking Add VoIP Application. Also from the application list, click on the application to update.

URL:

• http://localhost:8000/admin/voip_app/voipapp/



To Add/Update a VoIP application

URL:

• http://localhost:8000/admin/voip_app/voipapp/add/

3.3. Admin Panel 27

http://localhost:8000/admin/voip_app/voipapp/1/
Change VoIP Application

Name: Default_VoiP_App

Description:

Description about the Voip Application

Type: REDIRECT
Gateway:
Gateway used if we redirect the call

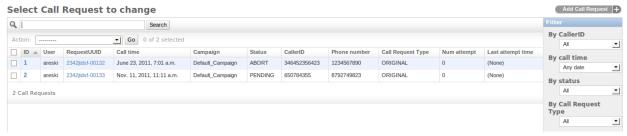
** Delete*

Call Request

The call request list will be displayed from the following URL. You can add a new call request by clicking Add Call Request. Also from the call request list, click on the request to update.

URL:

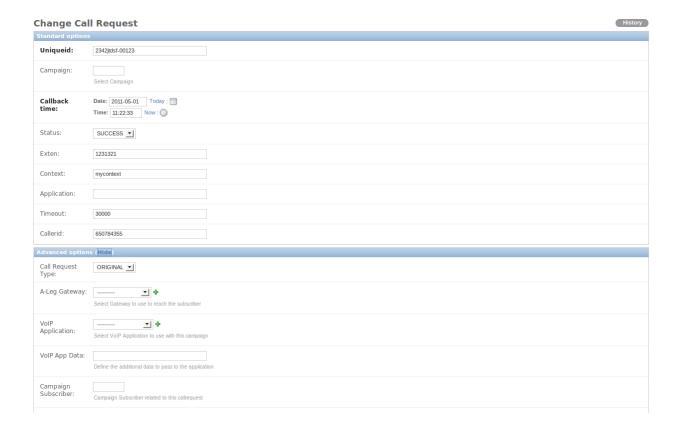
• http://localhost:8000/admin/dialer_cdr/callrequest/



To Add/Update a Call Request

URL:

- http://localhost:8000/admin/dialer_cdr/callrequest/add/
- http://localhost:8000/admin/dialer_cdr/callrequest/1/

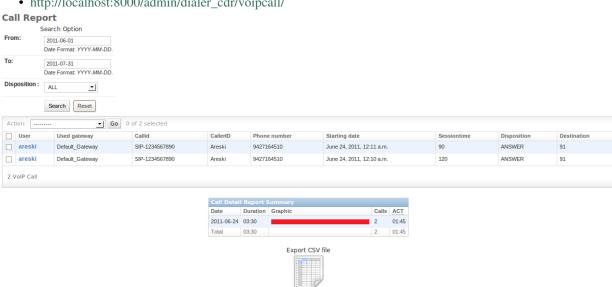


VoIP Call Report

A VoIP Call list will be displayed from following URL. You can not add new call reports.

URL:

• http://localhost:8000/admin/dialer_cdr/voipcall/



3.3. Admin Panel 29

3.4 Customer Panel

User Interface:

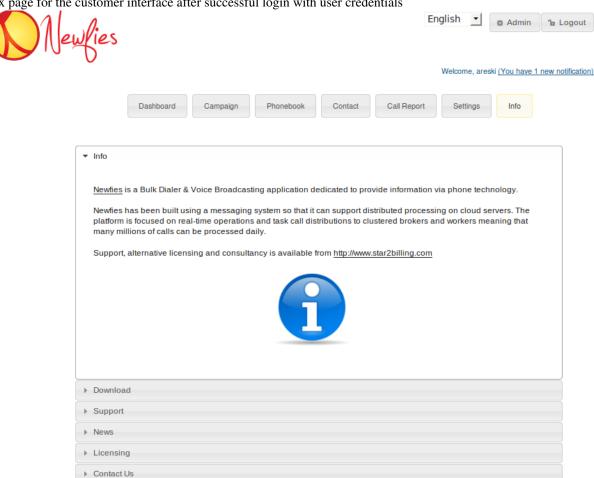
http://localhost:8000/ This application provides a user interface for restricted management of the User's Campaigns, Phonebooks and Subscribers. It also provides detailed reporting of calls and message delivery.

· Screenshot with Features

3.4.1 Screenshot with Features

Index

Index page for the customer interface after successful login with user credentials



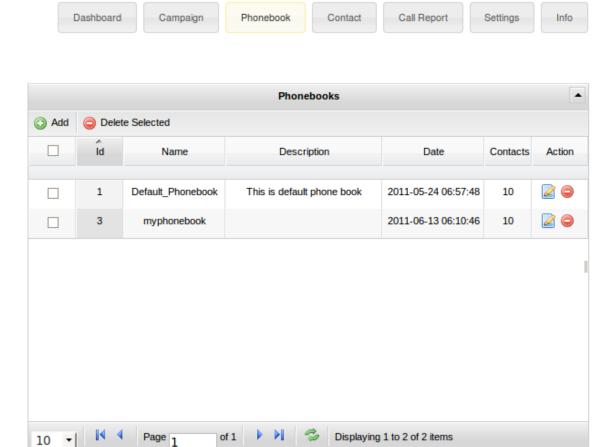
Newfies 1.1, Newfies is software licensed under the AGPL 3. Copyright (C) 2010 - Star2billing S.L. http://www.star2billing.com/

Phonebook

The phonebook list will be displayed from the following URL. You can add a new phonebook by clicking Add phonebook and add the name of a phonebook and its description. Also from the phonebook list, click on the phonebook to update.

URL:

• http://localhost:8000/dialer_campaign/phonebook/

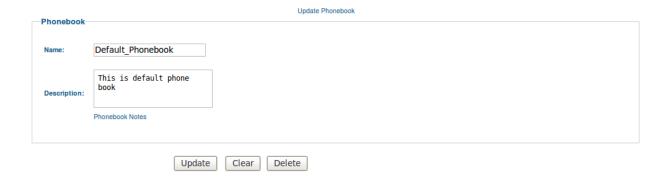


To Add/Update a Phonebook for a logged in user

URL:

- http://localhost:8000/dialer_campaign/phonebook/add/
- http://localhost:8000/dialer_campaign/phonebook/1/

3.4. Customer Panel 31

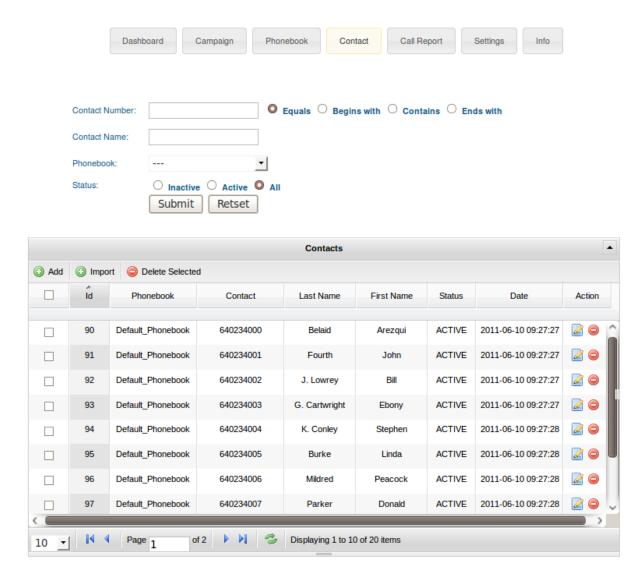


Contact

The contact list will be displayed from following the URL. You can add a new contact by clicking Add contact & adding the contact details (i.e. phone number, name, description about contact, contact status) under the logged in user's phonebook from the phonebook list. On the contact list, click on the contact to update.

URL:

• http://localhost:8000/dialer_campaign/contact/



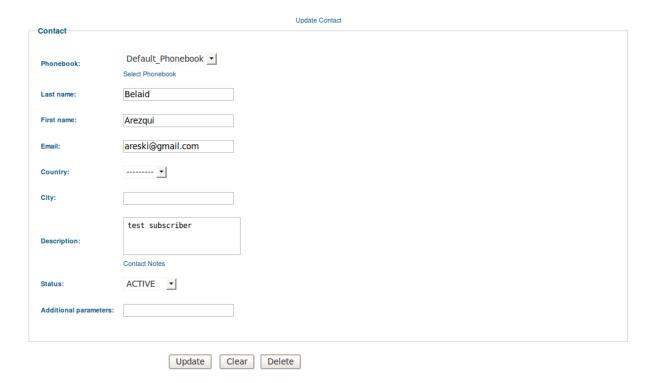
To Add/Update a contact in a phonebook

URL:

• http://localhost:8000/dialer_campaign/contact/add/

• http://localhost:8000/dialer_campaign/contact/1/

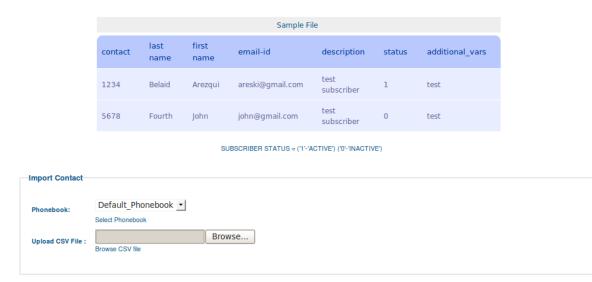
3.4. Customer Panel 33



To import bulk contacts into a phonebook, click on Import. where you can upload contacts via a CSV file under a logged in user's phonebook.

URL:

• http://localhost:8000/dialer_campaign/contact/import/



Campaign

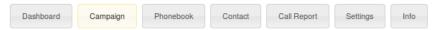
Submit Reset

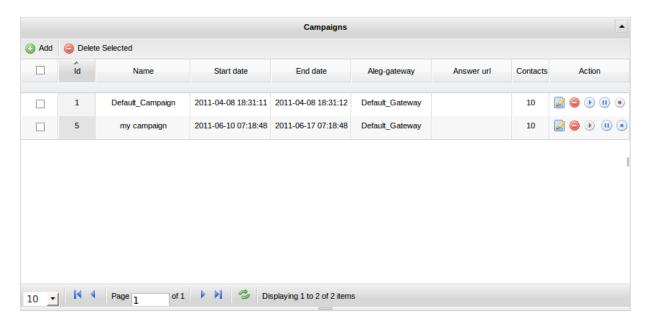
The campaign list will be displayed from the following URL. You can add a new campaign for the logged in user by clicking Add campaign. When adding a campaign, it is important to add the campaign's start and end dates with

time & week-day exceptions. Select the gateway through which calls will be routed & phonebook(s) that are linked with contacts from the campaign list, click on campaign to update.

URL:

• http://localhost:8000/dialer_campaign/campaign/



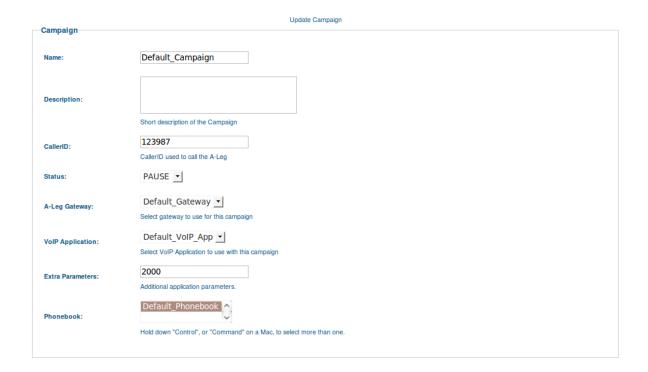


To Add/Update a Campaign for a logged in user

URL:

- http://localhost:8000/dialer_campaign/campaign/add/
- http://localhost:8000/dialer_campaign/campaign/1/

3.4. Customer Panel 35



Max Retries:	3		
	Define the max retry allowed per user.		
Time between		Timeout on Call	60
	3000	Timeout on Ca	all:
ime between Retries:	3000 Define the time to wait between retries in seconds	Timeout on Ca	Define the amount of second to timeout on calls
Retries: ampaign sch	Define the time to wait between retries in seconds	Timeout on Ca	all:
Retries:	Define the time to wait between retries in seconds		Define the amount of second to timeout on calls
detries: ampaign sch	Define the time to walt between retries in seconds hedule 2011-06-28 06:46:08	Daily start	Define the amount of second to timeout on calls 00:00:00

Dashboard

36

Dashboard gives the information anbout campaign & its related call records







TOTAL CALLS	31	CHANUNAVAIL	0
ANSWERED	5	DONTCALL	2
BUSY	2	TORTURE	0
NOANSWER	4	INVALIDARGS	0
CANCEL	2	NOROUTE	0
CONGESTION	2	FORBIDDEN	3

3.4. Customer Panel 37

CONFIGURATION AND DEFAULTS

Contents:

4.1 Sample Configuration

This is a sample configuration to get you started. It should contain all you need to create a basic set-up.

4.1.1 The Configuration Module

Some of the more important parts of the configuration module for the Newfies, settings.py, are explained below:

```
import os.path
APPLICATION_DIR = os.path.dirname(globals()['__file__'])
```

APPLICATION_DIR now contains the full path of your project folder and can be used elsewhere in the settings.py module so that your project may be moved around the system without you having to worry about changing any troublesome hard-coded paths.

```
DEBUG = True
```

turns on debug mode allowing the browser user to see project settings and temporary variables.

```
ADMINS = (('xyz', 'xyz@abc.com'))
```

sends all errors from the production server to the admin's email address.

```
DATABASE_ENGINE = 'mysql'
DATABASE_NAME = 'db-name'
DATABASE_USER = 'user'
DATABASE_PASSWORD = 'password'
DATABASE_HOST = 'mysql-host'
DATABASE_PORT = ''
```

sets up the options required for Django to connect to your database.

```
MEDIA_ROOT = os.path.join(APPLICATION_DIR, 'static')
```

tells Django where to find your media files such as images that the HTML templates might use.

```
ROOT_URLCONF = 'urls'
```

tells Django to start finding URL matches at in the urls.py module in the newfies project folder.

```
TEMPLATE_DIRS = ( os.path.join(APPLICATION_DIR, 'templates'), )

tells Django where to find your HTML template files.

INSTALLED_APPS = (
'django.contrib.auth',
'django.contrib.sessions',
'django.contrib.sessions',
'django.contrib.sites',
'django.contrib.admin',
...
'dialer_gateway',
'dialer_campaign',
'dialer_cat',
'dialer_settings',
'user_profile',
'voip_server',
'voip_app',
```

tells Django which applications (custom and external) to use in your project. The custom applications, dialer_gateway, dialer_campaign etc. are stored in the project folder along with these custom applications.

4.1.2 The URLs modules

)

The defined URL patterns for the CPI Pilot project are divided into URL patterns specific to the project and URL patterns specific to the applications. For more information on how the pattern matching syntax work or how to write your own url patterns please consult Django's URL Dispatcher documentation.

Project specific URL patterns

The URL patterns specific to the project are applied in the urls.py file that is stored in the project directory newfies. The code segments that add these URL patterns aren't lengthy and are shown below:

Application specific URL patterns

The URL patterns specific to the dialer_campaign application are applied in the /dialer_campaign/urls.py file in the dialer_campaign application folder. The code segment that adds these URL patterns isn't lengthy either and is shown below:

```
urlpatterns = patterns('dialer_campaign.views',
   (r'^phonebook/$', 'phonebook_list'),
   (r'^phonebook/add/$', 'phonebook_add'),
```

```
(r'^phonebook/(.+)/$', 'phonebook_change'),
```

4.1.3 The Views module

The functions defined in views.py represent the logic behind the webpages. The view functions (called through the URL matching) decide which data structures need to be constructed and sent through to the HTML templates. To do this, each view function uses Django's object relational model (ORM) to query the database picking out what is needed for any particular page.

```
@login_required
def phonebook_add(request):
    Add new Phonebook
    form = PhonebookForm()
    if request.method == 'POST':
        form = PhonebookForm(request.POST)
        if form.is_valid():
            obj = form.save(commit=False)
            obj.user = User.objects.get(username=request.user)
            obj.save()
            request.session["msg"] = _('"%s" is added successfully.' %\
            request.POST['name'])
            return HttpResponseRedirect('/dialer_campaign/phonebook/')
    template = 'dialer_campaign/phonebook/change.html'
    data = {
       'form': form,
       'action': 'add',
    return render_to_response(template, data,
           context_instance=RequestContext(request))
```

4.1.4 The Admin Module

The classes defined in admin.py tell Django what attributes are visible and modifiable from the admin site.

Code for naming convention (e.g. Voip -> VoIP) (in admin.py)

Example:

4.2 Celery Configuration

4.2.1 After installing Broker (Redis or Rabbitmq)

1. Redis Settings

This is a configuration example for Redis.

```
# Redis Settings
CARROT_BACKEND = "ghettoq.taproot.Redis"

BROKER_HOST = "localhost"  # Maps to redis host.
BROKER_PORT = 6379  # Maps to redis port.
BROKER_VHOST = "0"  # Maps to database number.

CELERY_RESULT_BACKEND = "redis"
REDIS_HOST = "localhost"
REDIS_PORT = 6379
REDIS_DB = 0
#REDIS_CONNECT_RETRY = True
```

2. Rabbitmq Settings

This is a configuration example for Rabbitmq.

```
BROKER_HOST = "localhost"

BROKER_PORT = 5672

BROKER_USER = "root"

BROKER_PASSWORD = "root"

BROKER_VHOST = "localhost"

CELERY_RESULT_BACKEND = "amqp"
```

4.2.2 Launch celery/celerybeat in debug mode

If you don't want to run celeryd and celerybeat as a daemon then

```
To run celeryd
```

```
$ python manage.py celeryd -E -1 debug
To run celerybeat
$ python manage.py celerybeat --schedule=/var/run/celerybeat-schedule
To run both
$ python manage.py celeryd -E -B -1 debug
```

4.2.3 Running celeryd/celerybeat as a daemon (Debian/Ubuntu)

To configure celeryd you will need to tell it where to change directory to, when it starts in order to find your celeryconfig.

```
$ cd install/celery-init/etc/default/
  1. Open celeryd in text editor & change the following variables
     Configuration file: /etc/default/celeryd
     Init script: celeryd.
     Usage: /etc/init.d/celeryd {start|stop|force-reload|restart|try-restart|status}:
     # Where to chdir at start
     CELERYD_CHDIR="/path/to/newfies/"
     # Path to celeryd
     CELERYD="/path/to/newfies/manage.py celeryd"
     # Extra arguments to celeryd
     CELERYD_OPTS="--time-limit=300"
     # Name of the celery config module.
     CELERY_CONFIG_MODULE="celeryconfig"
     # Extra Available options
     # %n will be replaced with the nodename.
     # Full path to the PID file. Default is /var/run/celeryd.pid.
     CELERYD_PID_FILE="/var/run/celery/%n.pid"
     # Full path to the celeryd log file. Default is /var/log/celeryd.log
     CELERYD_LOG_FILE="/var/log/celery/%n.log"
     # User/Group to run celeryd as. Default is current user.
     # Workers should run as an unprivileged user.
     CELERYD_USER="celery"
     CELERYD_GROUP="celery"
  2. Open celeryd (for periodic task) in text editor & add the following variables
     Configuration file: /etc/default/celerybeat or /etc/default/celeryd
     Init script: celerybeat
     Usage: /etc/init.d/celerybeat {start|stop|force-reload|restart|try-restart|status}:
     # Path to celerybeat
     CELERYBEAT="/path/to/newfies/manage.py celerybeat"
     # Extra arguments to celerybeat
     CELERYBEAT_OPTS="--schedule=/var/run/celerybeat-schedule"
  3. Copy the configuration file & init scripts to /etc dir:
     $ cp etc/default/celeryd /etc/default/
     $ cp etc/init.d/celeryd /etc/init.d/
     $ cp etc/init.d/celerybeat /etc/init.d/
  4. Run/Start or Stop celery as a daemon:
```

\$ /etc/init.d/celeryd start or stop

\$ /etc/init.d/celerybeat start or stop

4.2.4 Troubleshooting

If you can't get the celeryd as a daemon to work, you should try running them in verbose mode:

\$ sh -x /etc/init.d/celerybeat start

CHAPTER

FIVE

FREESWITCH INSTALLATION AND CONFIGURATION

Contents:

5.1 Freeswitch Installation and configuration

Freeswitch is the telephony engine used by Newfies-Dialer to make calls, as well as broadcast voice applications

Newfies-Dialer communicates with Freeswitch though the Event-Socket. Communication is made via the Communications Framework Plivo. Our Freeswitch dependencies are the same as Plivo, therefore the following modules will need to be installed

```
mod_curl, asr_tts, mod_flite, asr_tts, mod_shout, mod_dingaling, mod_shell_stream, mod_xml_cdr
```

In order to retrieve CDR Status from the outbound calls, you will have to configure xml_cdr.conf.xml and point it to the Newfies API to store CDR, which is by default: http://hostname_newfies/api/dialer_cdr/store_cdr/

A script for Freeswitch Installation which will install Freeswitch with the required modules and configure it for you is available.

Download and run the Freeswitch installation script.

Once logged in as root, execute the following command:

```
wget https://raw.github.com/Star2Billing/newfies-dialer/master/install/install-freeswitch.sh
```

The above commmand download the installation script. We can then execute the script with the following command:

```
bash install-freeswitch.sh
```

This will download and install Freeswitch with the modules appropriate for Newfies-Dialer. The installation will take some time, but does not require your interaction once started.

5.2 Plivo Installation and configuration

When Freeswitch is installed, the next task is to install Plivo. Plivo is an open source communications framework to rapidly deploy voice based applications used in conjunction with Newfies-Dialer.

Run the following commands:

```
wget https://raw.github.com/plivo/plivo/master/scripts/plivo_install_beta.sh
then:
bash plivo_install_beta.sh /usr/share/plivo
```

This will download and install Plivo and all its dependencies. We need to have Plivo start on boot, so run the following command to make it automatically start.

ln -s /usr/share/plivo/bin/plivo /etc/rc2.d/S99plivo

Please note that the Plivo script makes alterations to the Freeswitch dial-plan, so it should not be blindly run on an existing working Freeswitch installation, as it will change your current configuration. If you wish to install Plivo on an existing version of Freeswitch, use the script as a guide, or edit it to suit your requirements.

5.3 Freeswitch Trunk configuration

In order for Newfies-Dialer to make outbound calls to its subscribers, you will need a SIP trunk. The Freeswitch wiki can provide more information on configuring trunks. However creating a trunk simply for Newfies-Dialer is straightforward.

Trunks or gateways, as they are known in Freeswitch, are configured using XML syntax, so using your favourite text editor, while logged in as root "sudo su -" create an XML file in /usr/local/freeswitch/conf/sip_profiles/external/ and give it an identifiable name, e.g. call-labs.xml, and place the following lines in the file:

```
<include>
<gateway name="ip address or hostname of carrier">
<!--/// account username *required* ///-->
<param name="username" value="your username provided by carrier"/>
<!--// auth realm: *optional* same as gateway name, if blank ///-->
<!--<param name="realm" value="asterlink.com"/>-->
<!--// username to use in from: *optional* same as username, if blank ///-->
<param name="from-user" value="your username provided by carrier"/>
<!--// domain to use in from: *optional* same as realm, if blank ///-->
<!--param name="from-domain" value=""/-->
<!--// account password *required* ///-->
<param name="password" value="your password supplied by carrier"/>
<!--// extension for inbound calls: *optional* same as username, if blank ///-->
<!--<param name="extension" value="cluecon"/>-->
<!--// proxy host: *optional* same as realm, if blank ///-->
<!--<param name="proxy" value="asterlink.com"/>-->
<!--// send register to this proxy: *optional* same as proxy, if blank ///-->
<!--<param name="register-proxy" value="mysbc.com"/>-->
<!--// expire in seconds: *optional* 3600, if blank ///-->
<!--<param name="expire-seconds" value="60"/>-->
<!--/// do not register ///-->
<param name="register" value="true"/>
<!-- which transport to use for register -->
<!--<param name="register-transport" value="udp"/>-->
<!--How many seconds before a retry when a failure or timeout occurs -->
<!--<param name="retry-seconds" value="30"/>-->
<!--Use the callerid of an inbound call in the from field on outbound calls via this gateway -->
<!--<param name="caller-id-in-from" value="false"/>-->
<!--extra sip params to send in the contact-->
<!--<param name="contact-params" value="tport=tcp"/>-->
<!--send an options ping every x seconds, failure will unregister and/or mark it down-->
<!--<param name="ping" value="25"/>-->
```

```
</gateway> </include>
```

The uncommented lines are almost certainly required by your carrier and Freeswitch, the remaining parameters can be uncommented and used, if required by your carrier. The XML syntax for comments are denoted by lines that begin "<!-" and end in "->".

Finally we need to load the new configuration, and check the trunk is registered. Enter the Freeswitch CLI (Command Line Interface) from the console:

```
/usr/local/freeswitch/bin/fs_cli
```

You should now see the Freeswitch CLI, so now reload the Freeswitch configuration with the following command: (tip; Tab auto-completes):

```
sofia profile external restart reloadxml
```

When complete, check the trunk has registered with the command:

```
sofia status
```

Against the name of the trunk you configured in the XML file, you should see REGED (registered) at the end of the line. Take a note of the trunk name, we are going to need it for telling Newfies-Dialer that it can use this trunk.

To exit the Freeswitch CLI, do CTRL D, or /exit

Freeswitch configuration is now complete.

CHAPTER

SIX

DEVELOPER DOC

Contents:

6.1 Prerequisites

To fully understand this project, developers will need to have a advanced knowledge of:

```
• Django: http://www.djangoproject.com/
```

• Celery: http://celeryproject.org/

• Python: http://www.python.org/

• Freeswitch : http://freeswitch.org/

• Freeswitch : Event_Sockets (wiki.freeswitch.org/wiki/Mod_event_socket)

6.2 Coding Style & Structure

6.2.1 Style

Coding follows the PEP 8 Style Guide for Python Code.

6.2.2 Structure

The newfies directory:

```
|-- custom_admin_tools - The code for admin dashboard/menu
|-- dialer_campaign - The code for dialer campaign
   |-- api
   '-- fixtures
|-- dialer_cdr
                    - This defines the call request & its information
  |-- api
   '-- fixtures
                      - This defines the trunk to deliver the VoIP Calls
|-- dialer_gateway
  '-- fixtures
|-- dialer_settings - This defines sets of settings to apply on user
|-- voip_app
                     - This defines application that are defined on the platform
  '-- fixtures
|-- static
```

```
|-- newfies
      |-- css
   |-- js
   '-- images
   |-- user_profile
                    - The code for user profile to extend auth model of Django
|-- resources
                    - This area is used to hold media files
'-- templates
                    - This area is used to override templates
   |-- admin
   | |-- dialer_campaign
   | '-- dialer_cdr
   |-- admin_tools
   |-- registration
   |-- memcache_status
   '-- frontend
```

6.3 Objects Description

6.3.1 Phonebook

```
class dialer_campaign.models.Phonebook (*args, **kwargs)
    This defines the Phonebook
```

Attributes:

- •name phonebook name.
- •description description about the phonebook.

Relationships:

•user - Foreign key relationship to the User model. Each phonebook is assigned to a User

Name of DB table: dialer_phonebook

```
phonebook_contacts()
```

This will return a count of the contacts in the phonebook

6.3.2 Contact

```
class dialer_campaign.models.Contact(*args, **kwargs)
    This defines the Contact
```

Attributes:

- •contact Contact no
- •last_name Contact's last name
- •first_name Contact's first name
- •email Contact's e-mail address
- •city city name
- •description description about a Contact
- •status contact status
- •additional_vars Additional variables

Relationships:

- •phonebook Foreign key relationship to the Phonebook model. Each contact mapped with a phonebook
- •country Foreign key relationship to the Country model. Each contact mapped with a country

Name of DB table: dialer_contact

contact name()

Return Contact Name

6.3.3 CampaignManager

```
{\bf class} \; {\tt dialer\_campaign.models.CampaignManager}
```

Campaign Manager

get_expired_campaign()

Return all the campaigns which are expired or going to expire based on the expiry date but status is not 'END'

get_running_campaign()

Return all the active campaigns which will be running based on the expiry date, the daily start/stop time and days of the week

6.3.4 Campaign

```
class dialer_campaign.models.Campaign(*args, **kwargs)
```

This defines the Campaign

Attributes:

- •campaign_code Autogenerate campaign code to identify the campaign
- •name Campaign name
- •description Description about the Campaign
- •status Campaign status
- •callerid Caller ID
- •startingdate Starting date of the Campaign
- \bullet expirationdate Expiry date of the Campaign
- •daily_start_time Start time
- •daily_stop_time End time
- •week_day_setting (monday, tuesday, wednesday, thursday, friday, saturday, sunday)
- •frequency Frequency, speed of the campaign. number of calls/min
- •callmaxduration Max retry allowed per user
- •maxretry Max retry allowed per user
- •intervalretry Time to wait between retries in seconds
- •calltimeout Number of seconds to timeout on calls
- •aleg_gateway Gateway to use to reach the contact
- •extra_data Additional data to pass to the application

Relationships:

```
•voipapp - Foreign key relationship to the VoipApp model. VoIP Application to use with this campaign
```

•phonebook - Many-To-Many relationship to the Phonebook model.

•user - Foreign key relationship to the a User model. Each campaign assigned to a User

Name of DB table: dialer campaign

campaignsubscriber detail()

This will link to campaign subscribers who are associated with the campaign

count_contact_of_phonebook (status=None)

Count the no. of Contacts in a phonebook

get_active_callmaxduration()

Get the active call max duration

get_active_contact()

Get all the active Contacts from the phonebook

get_active_contact_no_subscriber()

List of active contacts that do not exist in Campaign Subscriber

get_active_max_frequency()

Get the active max frequency

get_pending_subscriber(limit=1000)

Get all the pending subscribers from the campaign

is_authorized_contact (str_contact)

Check if a contact is authorized

progress_bar()

Progress bar generated based on no of contacts

update_campaign_status()

Update the campaign's status

For example, If campaign is active, you can change status to 'Pause' or 'Stop'

6.3.5 CampaignSubscriber

```
class dialer_campaign.models.CampaignSubscriber(*args, **kwargs)
```

This defines the Contact imported to a Campaign

Attributes:

- •last_attempt -
- •count attempt -
- •duplicate_contact -
- •status -

Relationships:

- •contact Foreign key relationship to the Contact model.
- •campaign Foreign key relationship to the Campaign model.

Name of DB table: dialer_campaign_subscriber

6.3.6 Callrequest

```
class dialer_cdr.models.Callrequest(*args, **kwargs)
```

This defines the call request, the dialer will read any new request and attempt to deliver the call.

Attributes:

- •request_uuid Unique id
- •call_time Total call time
- •call_type Call type
- •status Call request status
- •callerid Caller ID
- •last_attempt_time -
- •result -
- •timeout -
- •timelimit -
- •extra_dial_string -
- •phone_number -
- •parent_callrequest -
- •extra_data -
- •num_attempt -
- •hangup_cause -

Relationships:

- •user Foreign key relationship to the User model. Each campaign assigned to a User
- •voipapp Foreign key relationship to the VoipApp model. VoIP Application to use with this campaign
- •aleg_gateway Foreign key relationship to the Gateway model. Gateway to use to reach the subscriber
- •campaign_subscriber Foreign key relationship to the CampaignSubscriber Model.
- •campaign Foreign key relationship to the Campaign model.

Name of DB table: dialer_callrequest

6.3.7 VoIPCall

```
class dialer_cdr.models.VoIPCall(*args, **kwargs)
```

This gives information of all the calls made with the carrier charges and revenue of each call.

Attributes:

- •callid callid of the phonecall
- •callerid CallerID used to call out
- •phone_number Phone number contacted
- •dialcode Dialcode of the phonenumber
- •starting_date Starting date of the call

```
•duration - Duration of the call
```

- •billsec-
- •progresssec -
- •answersec-
- •waitsec-
- •disposition Disposition of the call
- •hangup_cause -
- •hangup_cause_q850 -

Relationships:

- •user Foreign key relationship to the User model.
- •used_gateway Foreign key relationship to the Gateway model.
- •callrequest Foreign key relationship to the Callrequest model.

Name of DB table: dialer_cdr

destination_name()

Return Recipient dialcode

min_duration()

Return duration in min & sec

6.3.8 Gateway

```
class dialer_gateway.models.Gateway(*args, **kwargs)
```

This defines the trunk to deliver the Voip Calls. Each of the Gateways are routes that support different protocols and sets of rules to alter the dialed number.

Attributes:

- •name Gateway name.
- •description Description about the Gateway.
- •addprefix Add prefix.
- •removeprefix Remove prefix.
- •gateways "user/,user", # Gateway string to try dialing separated by comma. First in the list will be tried first
- •gateway_codecs "'PCMA,PCMU','PCMA,PCMU'", # Codec string as needed by FS for each gateway separated by comma
- •gateway_timeouts "10,10", # Seconds to timeout in string for each gateway separated by comma
- •gateway_retries "2,1", # Retry String for Gateways separated by comma, on how many times each gateway should be retried
- •originate_dial_string originate_dial_string
- •secondused -
- •failover-
- •addparameter -

- •count call -
- •count_in_use -
- •maximum_call -
- •status Gateway status

Name of DB table: dialer_gateway

6.3.9 DialerSetting

class dialer_settings.models.DialerSetting(*args, **kwargs)

This defines the settings to apply to a user

Attributes:

- •name Settings name.
- •max_frequency Max frequency, speed of the campaign. This is the number of calls per minute.
- •callmaxduration Max retries allowed
- •maxretry Max retries allowed per user
- •max_calltimeout Maximum number of seconds to timeout on calls
- •max_number_campaign Max Number of campaigns
- •max_number_subscriber_campaign Max Number of subscribera
- •blacklist Used to blacklist phone numbers to be called
- $\mbox{\ensuremath{\mbox{\tiny \bullet}}}\mbox{\ensuremath{\mbox{\tiny \bullet

Name of DB table: dialer_setting

6.3.10 UserProfile

class user_profile.models.UserProfile(*args, **kwargs)

This defines extra features for the user

Attributes:

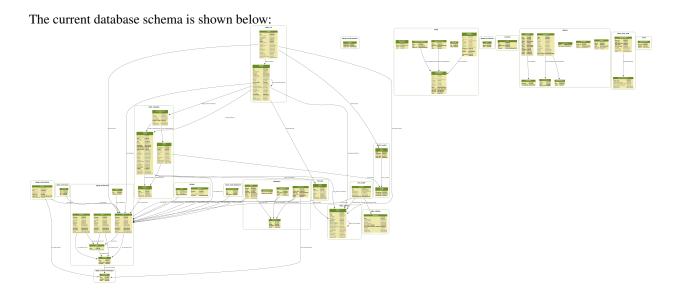
•account code - Account name.

Relationships:

- •user Foreign key relationship to the User model.
- •userprofile_gateway ManyToMany
- •userprofile_voipservergroup ManyToMany
- •dialersetting Foreign key relationship to the DialerSetting model.

Name of DB table: user_profile

6.4 Database Design



6.5 Newfies-Dialer Views

6.5.1 index

dialer_campaign.views.index (request)
Index view of the Customer Interface

Attributes:

- •form LoginForm
- •template frontend/index.html

6.5.2 customer_dashboard

dialer_campaign.views.customer_dashboard(request, *args, **kwargs)

Customer dashboard gives the following information

- •No of Campaigns for logged in user
- •Total phonebook contacts
- •Total Campaigns contacts
- •Amount of contact reached today
- •Disposition of calls via pie chart
- •Call records & Duration of calls are shown on graph by days/hours basis.

Attributes:

- •template frontend/dashboard.html
- •form DashboardForm

6.5.3 login_view

```
dialer_campaign.views.login_view(request)
    Check User credentials
```

Attributes:

- •form LoginForm
- •template frontend/index.html

Logic Description:

- •Submitted user credentials need to be checked. If it is not valid then the system will redirect to the login page.
- •If submitted user credentials are valid then system will redirect to the dashboard.

6.5.4 cust_password_reset

```
dialer_campaign.views.cust_password_reset (request)
   Use django.contrib.auth.views.password_reset view method for forgotten password on the Customer UI
```

This method sends an e-mail to the user's email-id which is entered in password_reset_form

6.5.5 cust_password_reset_done

```
dialer_campaign.views.cust_password_reset_done(request)
```

Use $django.contrib.auth.views.password_reset_done$ view method for forgotten password on the Customer UI

This will show a message to the user who is seeking to reset their password.

6.5.6 cust password reset confirm

```
dialer_campaign.views.cust_password_reset_confirm(request, uidb36=None, token=None)

Use django.contrib.auth.views.password_reset_confirm view method for forgotten password on the Customer UI
```

This will allow a user to reset their password.

6.5.7 common_send_notification

```
dialer_campaign.views.common_send_notification(request, status, recipi-
```

User Notification (e.g. start | stop | pause | abort | contact/camapign limit) needs to be saved. It is a common function for the admin and customer UI's

Attributes:

- •pk primary key of the campaign record
- •status get label for notifications

Logic Description:

•This function is used by update_campaign_status_admin() & update_campaign_status_cust()

6.5.8 common_campaign_status

```
dialer_campaign.views.common_campaign_status(pk, status)
```

Campaign Status (e.g. start | stop | abort | pause) needs to be changed. It is a common function for the admin and customer UI's

Attributes:

- •pk primary key of the campaign record
- •status selected status for the campaign record

Logic Description:

- •Selected Campaign's status needs to be changed. Changed status can be start, stop or pause.
- •This function is used by update_campaign_status_admin() & update_campaign_status_cust()

6.5.9 phonebook_list

```
dialer_campaign.views.phonebook_list (request, *args, **kwargs)

Phonebook list for the logged in user
```

Attributes:

•template - frontend/phonebook/list.html

Logic Description:

•List all phonebooks which belong to the logged in user.

6.5.10 phonebook_grid

```
dialer_campaign.views.phonebook_grid(request, *args, **kwargs)

Phonebook list in json format for flexigrid.
```

Model: Phonebook

Fields: [id, name, description, updated_date]

6.5.11 phonebook add

```
dialer_campaign.views.phonebook_add(request, *args, **kwargs)

Add new Phonebook for the logged in user
```

Attributes:

- •form PhonebookForm
- •template frontend/phonebook/change.html

Logic Description:

•Add a new phonebook which will belong to the logged in user via the phonebookForm & get redirected to the phonebook list

6.5.12 phonebook_change

```
dialer_campaign.views.phonebook_change(request, *args, **kwargs)
Update/Delete Phonebook for the logged in user
```

Attributes:

- •object_id Selected phonebook object
- •form PhonebookForm
- •template frontend/phonebook/change.html

Logic Description:

•Update/delete selected phonebook from the phonebook list via PhonebookForm & get redirected to phonebook list

6.5.13 contact_list

```
dialer_campaign.views.contact_list (request, *args, **kwargs)
    Contact list for the logged in user
```

Attributes:

- •template frontend/contact/list.html
- •form ContactSearchForm

Logic Description:

•List all contacts from phonebooks belonging to the logged in user

6.5.14 contact_grid

```
dialer_campaign.views.contact_grid(request, *args, **kwargs)
    Contact list in json format for flexigrid
```

Model: Contact

Fields: [id, phonebook__name, contact, last_name, first_name, description, status, additional_vars, updated_date]

6.5.15 contact add

```
dialer_campaign.views.contact_add (request, *args, **kwargs)
Add a new contact into the selected phonebook for the logged in user
```

Attributes:

- •form ContactForm
- •template frontend/contact/change.html

Logic Description:

- •Before adding a contact, check dialer setting limit if applicable to the user.
- •Add new contact belonging to the logged in user via ContactForm & get redirected to the contact list

6.5.16 contact_change

```
dialer_campaign.views.contact_change(request, *args, **kwargs)
Update/Delete contact for the logged in user
```

Attributes:

- •object_id Selected contact object
- •form ContactForm
- •template frontend/contact/change.html

Logic Description:

•Update/delete selected contact from the contact list via ContactForm & get redirected to the contact list

6.5.17 contact_import

```
dialer_campaign.views.contact_import (request, *args, **kwargs)
Import CSV file of Contacts for the logged in user
```

Attributes:

- •form Contact_fileImport
- •template frontend/contact/import_contact.html

Logic Description:

- •Before adding contacts, check dialer setting limit if applicable to the user.
- •Add new contacts which will belong to the logged in user via csv file & get the result (upload success and failure statistics)

Important variable:

- •total_rows Total no. of records in the CSV file
- •retail_record_count No. of records imported from the CSV file

6.5.18 campaign_list

```
dialer_campaign.views.campaign_list(request, *args, **kwargs)
List all campaigns for the logged in user
```

Attributes:

•template - frontend/campaign/list.html

Logic Description:

•List all campaigns belonging to the logged in user

6.5.19 campaign_grid

```
dialer_campaign.views.campaign_grid(request, *args, **kwargs)

Campaign list in json format for flexigrid
```

Model: Campaign

Fields: [id, campaign_code, name, startingdate, expirationdate, aleg_gateway, aleg_gateway__name, status, voipapp__name]

6.5.20 campaign_add

```
dialer_campaign.views.campaign_add (request, *args, **kwargs)
Add a new campaign for the logged in user
```

Attributes:

- •form CampaignForm
- •template frontend/campaign/change.html

Logic Description:

- •Before adding a campaign, check dialer setting limit if applicable to the user.
- •Add the new campaign which will belong to the logged in user via CampaignForm & get redirected to campaign list

6.5.21 campaign_change

```
dialer_campaign.views.campaign_change (request, *args, **kwargs)
Update/Delete campaign for the logged in user
```

Attributes:

- •object_id Selected campaign object
- •form CampaignForm
- •template frontend/campaign/change.html

Logic Description:

•Update/delete selected campaign from the campaign list via CampaignForm & get redirected to the campaign list

6.6 Newfies-Dialer Admin Views

6.6.1 CampaignAdmin

```
class dialer_campaign.admin.CampaignAdmin (model, admin_site)
```

Allows the administrator to view and modify certain attributes of a Campaign.

```
add_view (request, extra_context=None)
```

Override django add view method for checking the dialer setting limit

Logic Description:

•Before adding campaign, checked dialer setting limit if applicable to the user, if matched, the user will be redirected to the campaign list

form

alias of CampaignAdminForm

6.6.2 PhonebookAdmin

class dialer_campaign.admin.PhonebookAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a Phonebook.

6.6.3 ContactAdmin

class dialer_campaign.admin.ContactAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a Contact.

add view(request, extra context=None)

Override django admin add_view method for checking the dialer setting limit

Logic Description:

•Before adding a contact, check the dialer setting limit if applicable to the user. If matched, the user will be redirected to the contact list

import_contact (request)

Add custom method in django admin view to import CSV file of Contacts

Attributes:

- •form Contact_fileImport
- •template admin/dialer_campaign/contact/import_contact.html

Logic Description:

- •Before adding contact, check the dialer setting limit if applicable to the user.
- •Add a new contact which will belong to the logged in user via csv file & get the result (Upload success & failure statistics)

Important variable:

- •total_rows Total no. of records in the CSV file
- •retail_record_count No. of records which are imported from The CSV file

6.6.4 CampaignSubscriberAdmin

class dialer_campaign.admin.CampaignSubscriberAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a CampaignSubscriber.

6.6.5 CallrequestAdmin

class dialer_cdr.admin.CallrequestAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a Callrequest.

6.6.6 VoIPCallAdmin

class dialer_cdr.admin.VoIPCallAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a VoIPCall.

changelist_view (request, extra_context=None)

Override changelist_view method of django-admin for search parameters

Attributes:

- •form VoipSearchForm
- •template admin/dialer_cdr/voipcall/change_list.html

Logic Description:

•VoIP report Record Listing with search option & Daily Call Report search Parameters: by date, by status and by billed.

export_voip_report (request)

Export a CSV file of VoIP call records

Important variable:

•request.session['voipcall_record_qs'] - stores voipcall query set

Exported fields: [user, callid, callerid, phone_number, starting_date, duration, disposition, used_gateway] duration, disposition,

has_add_permission (request)

Remove add permission on VoIP Call Report model

Logic Description:

•Override django admin has_add_permission method to remove add permission on VoIP Call Report model

used_gateway_link(obj)

Used gateway link to edit gateway detail

$user_link(obj)$

User link to user profile

6.6.7 GatewayAdmin

```
class dialer_gateway.admin.GatewayAdmin (model, admin_site)
```

Allows the administrator to view and modify certain attributes of a Gateway.

6.6.8 DialerSettingAdmin

class dialer_settings.admin.DialerSettingAdmin (model, admin_site)

Allows the administrator to view and modify certain attributes of a DialerSetting.

add_view (request, extra_context=None)

Add Dialer setting

change_view (request, object_id, extra_context=None)

Edit dialer settings

changelist_view (request, extra_context=None)

Dialer setting list

6.7 Newfies Tasks

```
class dialer_campaign.tasks.check_campaign_pendingcall
     This will execute the outbound calls in the campaign
     Attributes:
         •campaign_id - Campaign ID
class dialer_campaign.tasks.campaign_running
     A periodic task that checks the campaign, create and tasks the calls
     Usage:
         campaign_running.delay()
class dialer_campaign.tasks.collect_subscriber
     This task will collect all the subscribers
     Attributes:
         •campaign_id - Campaign ID
class dialer_cdr.tasks.init_callrequest
     This task outbounds the call
     Attributes:
         •callrequest_id - Callrequest ID
class dialer_cdr.tasks.callrequest_pending
     A periodic task that checks for pending calls
```

6.8 Newfies Signals

Usage:

6.8.1 post_save_add_contact

callrequest_pending.delay()

```
dialer_campaign.models.post_save_add_contact (sender, **kwargs)

A post_save signal is sent by the Contact model instance whenever it is going to save.
```

Logic Description:

- •When snew contact is added into Contact model, active the campaign list will be checked with the contact status.
- •If the active campaign list count is more than one & the contact is active, the contact will be added into CampaignSubscriber model.

6.9 Test Case Descriptions

6.9.1 Requirement

Run/Start Celery:

```
$ /etc/init.d/celery start
$ python manage.py celeryd -l info
Run/Start Redis:
$ /etc/init.d/redis-server start
6.9.2 How to run test
1. Run Full Test Suit:
$ python manage.py test --verbosity=2
2. Run NewfiesTastypieApiTestCase:
$ python manage.py test dialer_cdr.NewfiesTastypieApiTestCase --verbosity=2
3. Run NewfiesAdminInterfaceTestCase:
$ python manage.py test dialer_cdr.NewfiesAdminInterfaceTestCase --verbosity=2
4. Run NewfiesCustomerInterfaceTestCase:
$ python manage.py test dialer_cdr.NewfiesCustomerInterfaceTestCase --verbosity=2
6.9.3 Tastypie API Test Case
class dialer_cdr.tests.NewfiesTastypieApiTestCase (methodName='runTest')
     Test cases for Newfies-Dialer API.
     test create answercall()
         Test Function to create a answercall
     test_create_bulk_contact()
         Test Function to bulk create contacts
     test_create_callrequest()
         Test Function to create a callrequest
     test_create_campaign()
         Test Function to create a campaign
     test_create_campaign_subscriber()
         Test Function to create a campaign subscriber
     test_create_cdr()
         Test Function to create a CDR
     test create hangupcall()
         Test Function to create a answercall
```

test_create_phonebook()

test_delete_campaign()

Test Function to create a phonebook

Test Function to delete a campaign

test_delete_cascade_campaign()

```
Test Function to cascade delete a campaign
     test_read_callrequest()
         Test Function to get all callrequests
     test_read_campaign()
         Test Function to get all campaigns
     test read campaign subscriber()
         Test Function to get all campaign subscriber
     test_read_phonebook()
         Test Function to get all phonebooks
     test_update_campaign()
         Test Function to update a campaign
     test_update_campaign_subscriber()
         Test Function to update a campaign subscriber
6.9.4 Admin Interface Test Case
class dialer_cdr.tests.NewfiesAdminInterfaceTestCase (methodName='runTest')
     Test cases for Newfies Admin Interface.
     setUp()
         To create admin user
     test admin index()
         Test Function to check Admin index page
     test_admin_newfies()
         Test Function to check Newfies Admin pages
6.9.5 Customer Interface Test Case
class dialer_cdr.tests.NewfiesCustomerInterfaceTestCase (methodName='runTest')
     Test cases for Newfies Customer Interface.
     test campaign view()
         Test Function to check phonebook
     test_contact_view()
         Test Function to check Contact
     test dashboard()
         Test Function to check customer dashboard
     test index()
         Test Function to check customer index page
     test_phonebook_view()
         Test Function to check phonebook
     test user settings()
         Test Function to check User settings
     test_voip_call_report()
         Test Function to check VoIP call report
```

test_voipapp_view()

Test Function to check voipapp

6.9.6 Customer Interface Forgot Test Case

class dialer_cdr.tests.NewfiesCustomerInterfaceForgotPassTestCase (methodName='runTest')
 Test cases for Newfies Customer Interface. for forgot password

test_check_password_reset()

Test Function to check password reset

API REFERENCE

Contents:

7.1 CampaignResource

class api.resources.CampaignResource(api_name=None)
 Attributes:

- •campaign_code Autogenerate campaign code
- •name Name of the Campaign
- •description Short description of the Campaign
- •callerid Caller ID
- •startingdate Start date. Epoch Time, ie 1301414368
- •expirationdate Expiry date. Epoch Time, ie 1301414368
- •daily_start_time Daily start time, default '00:00:00'
- •daily_stop_time Daily stop time, default '23:59:59'
- •monday Set to 1 if you want to run this day of the week, default '1'
- •tuesday Set to 1 if you want to run this day of the week, default '1'
- •wednesday Set to 1 if you want to run this day of the week, default '1'
- •thursday Set to 1 if you want to run this day of the week, default '1'
- •friday Set to 1 if you want to run this day of the week, default '1'
- •saturday Set to 1 if you want to run this day of the week, default '1'
- •sunday Set to 1 if you want to run this day of the week, default '1'

Campaign Settings:

- •frequency Defines the frequency, speed of the campaign. This is the number of calls per minute.
- •callmaxduration Maximum call duration.
- •maxretry Defines the max retries allowed per user.
- •intervalretry Defines the time to wait between retries in seconds
- •calltimeout Defines the number of seconds to timeout on calls

Gateways:

- •aleg_gateway Defines the Gateway to use to call the subscriber
- •voipapp Defines the application to use when the call is established on the A-Leg
- •extra_data Defines the additional data to pass to the application

Validation:

CampaignValidation()

Create:

```
CURL Usage:
```

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
```

Response:

```
HTTP/1.0 201 CREATED
Date: Fri, 23 Sep 2011 06:08:34 GMT
Server: WSGIServer/0.1 Python/2.7.1+
Vary: Accept-Language, Cookie
Content-Type: text/html; charset=utf-8
Location: http://localhost:8000/api/app/campaign/1/
Content-Language: en-us
```

Read:

CURL Usage:

```
curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/campaig
```

Response:

```
"meta":{
   "limit":20,
   "next":null,
   "offset":0,
   "previous":null,
   "total_count":1
},
"objects":[
      "callerid": "123987",
      "callmaxduration":1800,
      "calltimeout":45,
      "campaign_code": "XIUER",
      "created_date": "2011-06-15T00:49:16",
      "daily_start_time":"00:00:00",
      "daily_stop_time":"23:59:59",
      "description":"",
      "expirationdate": "2011-06-22T00:01:15",
      "extra_data":"",
      "frequency":10,
      "friday":true,
      "id":"1",
      "intervalretry":3,
      "maxretry":3,
      "monday":true,
      "name": "Default_Campaign",
```

```
"resource_uri":"/api/app/campaign/1/",
             "saturday":true,
             "startingdate":"2011-06-15T00:01:15",
             "status":1,
             "sunday":true,
             "thursday":true,
             "tuesday":true,
             "updated_date":"2011-06-15T00:49:16",
             "wednesday":true
       ]
Update:
    CURL Usage:
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X PUT --data
    Response:
    HTTP/1.0 204 NO CONTENT
    Date: Fri, 23 Sep 2011 06:46:12 GMT
    Server: WSGIServer/0.1 Python/2.7.1+
    Vary: Accept-Language, Cookie
    Content-Length: 0
    Content-Type: text/html; charset=utf-8
    Content-Language: en-us
Delete:
    CURL Usage:
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X DELETE htt
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X DELETE htt
    Response:
    HTTP/1.0 204 NO CONTENT
    Date: Fri, 23 Sep 2011 06:48:03 GMT
    Server: WSGIServer/0.1 Python/2.7.1+
    Vary: Accept-Language, Cookie
    Content-Length: 0
    Content-Type: text/html; charset=utf-8
    Content-Language: en-us
Search:
    CURL Usage:
    curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/campaig
    Response:
       "meta":{
          "limit":20,
          "next":null,
          "offset":0,
          "previous":null,
```

```
"total_count":1
   "objects":[
      {
         "aleg_gateway":{
            "created_date": "2011-06-15T00:28:52",
            "description":"",
            "id":"1",
            "maximum_call":null,
            "name": "Default_Gateway",
         "callerid": "1239876",
         "callmaxduration":50,
         "calltimeout":45,
         "campaign_code": "DJZVK",
         "created_date":"2011-10-13T02:06:22",
         "daily_start_time":"00:00:00",
         "daily_stop_time":"23:59:59",
         "description":"",
         "expirationdate": "2011-03-28T17:08:56",
         "extra_data":"2000",
         "frequency":20,
         "friday":true,
         "id":"16",
         "intervalretry":3000,
         "maxretry":3,
         "monday":true,
         "name": "mycampaign2",
         "resource_uri":"/api/v1/campaign/16/",
         "saturday":true,
         "startingdate": "2011-03-29T09:48:56",
         "status":2,
         "sunday":true,
         "thursday":true,
         "tuesday":true,
         "updated_date":"2011-10-13T02:06:22",
         "user":{
            "id":"1",
            "username": "areski"
         "voipapp":{
            "id":"1",
            "name": "Default_VoIP_App",
         "wednesday":true
      }
   ]
}
```

7.2 CampaignDeleteCascadeResource

```
 \textbf{class} \texttt{ api.resources.CampaignDeleteCascadeResource} \ (api\_name = None) \\ \textbf{Attributes}:
```

•campaign_id - Campaign ID

```
CURL Usage:
```

```
curl -u username:password --dump-header - -H "Content-Type: application/json" -X DELETE http://

Example Response:

HTTP/1.0 204 NO CONTENT
Date: Wed, 18 May 2011 13:23:14 GMT
Server: WSGIServer/0.1 Python/2.6.2
```

7.3 PhonebookResource

Content-Type: text/plain

Vary: Authorization Content-Length: 0

```
class api.resources.PhonebookResource (api_name=None)
    Attributes:
```

```
•name - Name of the Phonebook
```

- •description Short description of the Campaign
- •campaign_id Campaign ID

Validation:

•PhonebookValidation()

Create:

```
CURL Usage:
```

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
```

Response:

```
HTTP/1.0 201 CREATED
Date: Fri, 23 Sep 2011 06:08:34 GMT
Server: WSGIServer/0.1 Python/2.7.1+
Vary: Accept-Language, Cookie
Content-Type: text/html; charset=utf-8
Location: http://localhost:8000/api/app/phonebook/1/
Content-Language: en-us
```

Read:

CURL Usage:

```
curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/phonebo
```

Response:

```
{
    "meta":{
        "limit":20,
        "next":null,
        "offset":0,
        "previous":null,
        "total_count":1
    },
    "objects":[
```

```
{
             "created_date":"2011-04-08T07:55:05",
             "description": "This is default phone book",
             "id":"1",
             "name": "Default_Phonebook",
             "resource_uri":"/api/v1/phonebook/1/",
             "updated_date": "2011-04-08T07:55:05",
             "user":{
                "first_name":"",
                "id":"1",
                "last_login":"2011-10-11T01:03:42",
                "last_name":"",
                "resource_uri":"/api/v1/user/1/",
                "username": "areski"
             }
          }
       ]
Update:
    CURL Usage:
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X PUT --data
    Response:
    HTTP/1.0 204 NO CONTENT
    Date: Fri, 23 Sep 2011 06:46:12 GMT
    Server: WSGIServer/0.1 Python/2.7.1+
    Vary: Accept-Language, Cookie
    Content-Length: 0
    Content-Type: text/html; charset=utf-8
    Content-Language: en-us
Delete:
    CURL Usage:
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X DELETE htt
    curl -u username:password --dump-header - -H "Content-Type: application/json" -X DELETE htt
    Response:
    HTTP/1.0 204 NO CONTENT
    Date: Fri, 23 Sep 2011 06:48:03 GMT
    Server: WSGIServer/0.1 Python/2.7.1+
    Vary: Accept-Language, Cookie
    Content-Length: 0
    Content-Type: text/html; charset=utf-8
    Content-Language: en-us
Search:
    CURL Usage:
    curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/phonebo
```

7.4 BulkContactResource

```
class api.resources.BulkContactResource(api_name=None)
    API to bulk create contacts
```

Attributes

- •contact contact number of the Subscriber
- •phonebook_id the phonebook Id to which we want to add the contact

Validation:

BulkContactValidation()

CURL Usage:

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data '{"p
```

Response:

```
HTTP/1.0 201 CREATED
Date: Thu, 13 Oct 2011 11:42:44 GMT
Server: WSGIServer/0.1 Python/2.7.1+
Vary: Accept-Language, Cookie
Content-Type: text/html; charset=utf-8
Location: http://localhost:8000/api/v1/bulkcontact/None/
Content-Language: en-us
```

7.5 CampaignSubscriberResource

class api.resources.CampaignSubscriberResource(api_name=None)

Attributes Details:

- •contact contact number of the Subscriber
- •last name last name of the Subscriber
- •first name first name of the Subscriber
- •email email id of the Subscriber
- •description Short description of the Subscriber
- •additional_vars Additional settings for the Subscriber
- •phonebook_id the phonebook Id to which we want to add the Subscriber

Validation:

CampaignSubscriberValidation()

Create:

CURL Usage:

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
```

Response:

```
HTTP/1.0 204 NO CONTENT
        Date: Wed, 18 May 2011 13:23:14 GMT
        Server: WSGIServer/0.1 Python/2.6.2
        Vary: Authorization
         Content-Length: 0
        Content-Type: text/plain
    Read:
        CURL Usage:
         curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/campaiq
            or
         curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/campaiq
         Response:
    Update:
        CURL Usage:
         curl -u username:password --dump-header - -H "Content-Type: application/json" -X PUT --data
        Response:
        HTTP/1.0 204 NO CONTENT
        Date: Fri, 23 Sep 2011 06:46:12 GMT
        Server: WSGIServer/0.1 Python/2.7.1+
        Vary: Accept-Language, Cookie
        Content-Length: 0
        Content-Type: text/html; charset=utf-8
        Content-Language: en-us
7.6 CallrequestResource
class api.resources.CallrequestResource(api_name=None)
    Attributes:
        •callrequest_id-Callrequest Id
        •request_uuid -
        •call_time -
        •call_type -
        •timeout -
        •timelimit -
        •status -
        •campaign_subscriber -
        •campaign -
        •voipapp -
        •callerid-
```

```
•phone_number -
   •extra_dial_string -
   •extra_data-
   •num_attempt -
   •last_attempt_time -
   •result -
   •hangup_cause -
   •last_attempt_time -
Validation:
   CallrequestValidation()
Create:
    CURL Usage:
    curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
    Response:
    HTTP/1.0 201 CREATED
    Date: Fri, 23 Sep 2011 06:08:34 GMT
    Server: WSGIServer/0.1 Python/2.7.1+
    Vary: Accept-Language, Cookie
    Content-Type: text/html; charset=utf-8
    Location: http://localhost:8000/api/app/campaign/1/
    Content-Language: en-us
Read:
    CURL Usage:
    curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/callred
    curl -u username:password -H 'Accept: application/json' http://localhost:8000/api/v1/callred
    Response:
       "meta":{
          "limit":20,
          "next":null,
          "offset":0,
          "previous":null,
          "total_count":1
       },
       "objects":[
             "call_time":"2011-10-20T12:21:22",
             "call_type":1,
             "callerid": "650784355",
             "created_date":"2011-10-14T07:33:41",
             "extra_data":"",
             "extra_dial_string":"",
             "hangup_cause":"",
```

"id":"1",

```
"last_attempt_time":null,
                  "num_attempt":0,
                  "phone_number": "8792749823",
                  "request_uuid":"2342jtdsf-00123",
                  "resource_uri":"/api/v1/callrequest/1/",
                  "result":"",
                  "status":1,
                  "timelimit":3600,
                  "timeout":30000,
                  "updated_date":"2011-10-14T07:33:41",
                  "user":{
                     "first_name":"",
                     "id":"1",
                     "last_login":"2011-10-11T01:03:42",
                     "last_name":"",
                     "resource_uri":"/api/v1/user/1/",
                     "username": "areski"
                  },
                  "voipapp":{
                     "created_date": "2011-04-08T08:00:09",
                     "data":"",
                     "description":"",
                     "id":"1",
                     "name": "Default_VoIP_App",
                     "resource_uri":"/api/v1/voipapp/1/",
                     "type":1,
                     "updated_date": "2011-10-14T07:33:41"
                  }
               }
            ]
    Update:
         CURL Usage:
         curl -u username:password --dump-header - -H "Content-Type: application/json" -X PUT --data
        Response:
        HTTP/1.0 204 NO CONTENT
        Date: Fri, 23 Sep 2011 06:46:12 GMT
        Server: WSGIServer/0.1 Python/2.7.1+
        Vary: Accept-Language, Cookie
         Content-Length: 0
        Content-Type: text/html; charset=utf-8
        Content-Language: en-us
7.7 CdrResource
class api.resources.CdrResource(api_name=None)
```

```
Attributes:
    •cdr - XML string assigned from the Telephony engine
Validation:
    CdrValidation()
```

Create:

```
CURL Usage:

curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data

Response:

HTTP/1.0 201 CREATED

Date: Fri, 23 Sep 2011 06:08:34 GMT

Server: WSGIServer/0.1 Python/2.7.1+

Vary: Accept-Language, Cookie

Content-Type: text/html; charset=utf-8

Location: http://localhost:8000/api/v1/store_cdr/None/

Content-Language: en-us
```

7.8 AnswercallResource

```
class api.resources.AnswercallResource(api_name=None)
```

Attributes:

•RequestUUID - A unique identifier for the API request.

Create:

```
CURL Usage:
```

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
```

Response:

7.9 HangupcallResource

```
class api.resources.HangupcallResource(api name=None)
```

Attributes:

```
ullet RequestUUID - RequestUUID
```

•HangupCause - Hangup Cause

Validation:

HangupcallValidation()

Create:

CURL Usage:

```
curl -u username:password --dump-header - -H "Content-Type:application/json" -X POST --data
```

Response:

EIGHT

CONTRIBUTING

- Community Code of Conduct
- Reporting a Bug
- Coding Style

8.1 Community Code of Conduct

Members of our community need to work together effectively, and this code of conduct lays down the ground rules for our cooperation.

Please read the following documentation about how the Newfies-Dialer Project functions, coding styles expected for contributions, and the community standards we expect everyone to abide by.

The Code of Conduct is heavily based on the Ubuntu Code of Conduct, Celery Code of Conduct, and the Pylons Code of Conduct.

8.1.1 Be considerate.

Your work will be used by other people, and you in turn will depend on the work of others. Any decision you take will affect users and colleagues, and we expect you to take those consequences into account when making decisions. Even if it's not obvious at the time, our contributions to Newfies-Dialer will impact the work of others. For example, changes to code, infrastructure, policy, documentation and translations during a release may negatively impact others work.

8.1.2 Be respectful.

The Newfies-Dialer community and its members treat one another with respect. Everyone can make a valuable contribution to Newfies-Dialer. We may not always agree, but disagreement is no excuse for poor behaviour and bad manners. We might all experience some frustration now and then, but we cannot allow that frustration to turn into a personal attack. It's important to remember that a community where people feel uncomfortable or threatened is not a productive one. We expect members of the Newfies-Dialer community to be respectful when dealing with other contributors as well as with people outside the Newfies-Dialer project and with users of Newfies-Dialer.

8.1.3 Be collaborative.

Collaboration is central to Newfies-Dialer and to the larger free software community. We should always be open to collaboration. Your work should be done transparently and patches from Newfies-Dialer should be given back to the community when they are made, not just when the distribution is released. If you wish to work on new code for existing upstream projects, at least keep those projects informed of your ideas and progress. It many not be possible to get consensus from upstream, or even from your colleagues about the correct implementation for an idea, so don't feel obliged to have that agreement before you begin, but at least keep the outside world informed of your work, and publish your work in a way that allows outsiders to test, discuss and contribute to your efforts.

8.1.4 When you disagree, consult others.

Disagreements, both political and technical, happen all the time and the Newfies-Dialer community is no exception. It is important that we resolve disagreements and differing views constructively and with the help of the community and community process. If you really want to go a different way, then we encourage you to make a derivative distribution or alternate set of packages that still build on the work we've done to utilise as common a core as possible.

8.1.5 When you are unsure, ask for help.

Nobody knows everything, and nobody is expected to be perfect. Asking questions avoids many problems down the road, and so questions are encouraged. Those who are asked questions should be responsive and helpful. However, when asking a question, care must be taken to do so in an appropriate forum.

8.1.6 Step down considerately.

Developers on every project come and go and Newfies-Dialer is no different. When you leave or disengage from the project, in whole or in part, we ask that you do so in a way that minimises disruption to the project. This means you should tell people you are leaving and take the proper steps to ensure that others can pick up where you leave off.

8.2 Reporting a Bug

Bugs can always be described to the *Mailing list*, but the best way to report an issue and to ensure a timely response is to use the issue tracker.

1. Create a GitHub account.

You need to create a GitHub account to be able to create new issues and participate in the discussion.

2. Determine if your bug is really a bug.

You should not file a bug if you are requesting support. For that you can use the *Mailing list*.

3. Make sure your bug hasn't already been reported.

Search through the appropriate Issue tracker. If a bug like yours was found, check if you have new information that could be reported to help the developers fix the bug.

4. Collect information about the bug.

To have the best chance of having a bug fixed, we need to be able to easily reproduce the conditions that caused it. Most of the time this information will be from a Python traceback message, though some bugs might be in design, spelling or other errors on the website/docs/code.

If the error is from a Python traceback, include it in the bug report.

We also need to know what platform you're running (Windows, OSX, Linux, etc), the version of your Python interpreter, the version of Newfies-Dialer and related packages that you were running when the bug occurred.

5. Submit the bug.

By default GitHub will email you to let you know when new comments have been made on your bug. In the event you've turned this feature off, you should check back on occasions to ensure you don't miss any questions a developer trying to fix the bug might ask.

8.2.1 Issue Trackers

Bugs for a package in the Newfies-Dialer ecosystem should be reported to the relevant issue tracker.

- Newfies-Dialer: http://github.com/Star2Billing/newfies-dialer/issues/
- Celery: https://github.com/ask/celery/issues/
- Freeswitch: http://jira.freeswitch.org/secure/Dashboard.jspa
- Plivo: https://github.com/plivo/plivo/issues/

If you are unsure of the origin of the bug you can ask the Mailing list, or just use the Newfies-Dialer issue tracker.

8.3 Coding Style

You should probably be able to pick up the coding style from surrounding code, but it is a good idea to be aware of the following conventions.

• All Python code must follow the PEP-8 guidelines.

pep8.py is a utility you can use to verify that your code is following the conventions.

• Docstrings must follow the PEP-257 conventions, and use the following style.

Do this:

```
def method(self, arg):
    """Short description.

    More details.

    """

or:
def method(self, arg):
    """Short description."""

but not this:
def method(self, arg):
    """
    Short description.
```

- Lines should not exceed 78 columns.
- Wildcard imports must not be used (from xxx import *).

8.3. Coding Style 83

NINE

FREQUENTLY ASKED QUESTIONS

- General
- · Misconceptions

9.1 General

9.1.1 What is Newfies-Dialer?

Answer: .

Newfies-Dialer is a voice broadcast application designed and built to automate the delivery of interactive phone calls to contacts, clients and the general public.

9.1.2 Why should I use Newfies-Dialer?

Answer: .

Below are some examples of some of the uses that Newfies-Dialer can be put to. There are more details and examples at http://www.newfies-dialer.org/solutions/

• Telecasting:

Broadcast marketing or informational messages to customers and clients.

• Telemarketing:

Broadcast a marketing message to potential customers, and give them the option to be put through

• Phone Polling, Surveys and Voting:

Ring large numbers of people and present IVR options for either polling their opinions, interact

• Debt Control:

Customers can be automatically reminded at intervals that they owe money, and an IVR menu preser

• Appointment reminders:

Doctors, Dentists, and other organisations that make appointments for their clients can integrat

• Dissemination of Information by Phone:

Newfies-Dialer was originally designed to call large numbers of people and disseminate medical a

Mass Emergency Broadcasting:

Where there is a necessity to warn large numbers of people in a short space of time, such as wea

• Voice Conferencing:

Attendees for a voice conference or podcast can be dialled up from a central location, and be co

• Subscription Reminders and Renewals:

Where a company sells an annual subscription for a product or service, Newfies-Dialer can be cor

9.1.3 What's the history behind Newfies-Dialer?

Answer: .

Newfies-Dialer is a bulk dialer application which was commissioned by a charity named Kubatana (http://www.kubatana.net) based in Zimbabwe, which sponsors the Freedomfone project (http://www.freedomfone.org/) dedicated to providing information via phone technology.

In less economically developed countries, Internet is often limited, but there is usually comprehensive mobile phone coverage. Freedomfone uses Newfies-Dialer to dial up people's phones and offer health information on Cholera, Malaria and so many other avoidable health issues in the third world, which may be alleviated by education. Newfies-Dialer was so named after the Newfoundland Dog nicknamed Newfies and used by sea rescue services around the world.

9.2 Misconceptions

9.2.1 Is Newfies-Dialer dependent on Celery?

Answer: Yes.

TEN

TROUBLESHOOTING

- · Where to find help
- Where to find the log files
- How to run a quick test call
- Run in debug mode
- Celerymon
- How to discard all pending tasks
- Checking Plivo is running
- · Checking Freeswitch
- Step By Step Checklist

10.1 Where to find help

10.1.1 Documentation:

http://www.newfies-dialer.org/documentation/

10.1.2 Mailing list:

We have set up a mailing list at http://groups.google.com/group/newfies-dialer

10.1.3 Forum:

We have a forum at http://forum.newfies-dialer.org/

10.1.4 Support:

Star2Billing S.L. offers consultancy including installation, training and customisation

10.2 Where to find the log files

All the logs are centralized into one single directory /var/log/newfies/

newfies-django-db.log: This contains all the Database queries performed by the UI

newfies-django.log: All the logger events from Django

err-apache-newfies.log: Any apache errors pertaining to Newfies-Dialer

celery-newfies-node1.log: This contains celery activity

10.3 How to run a quick test call

Go on the admin panel and check if there is any call request that has been spooled.

http://your-ip:8008/admin/dialer_cdr/callrequest/

If there are no calls queued, this means that the campaign is not properly configured.

You should:

- 1. Check if the campaign is started that the "Start time", "Finish Time" and server time are correct.
- 2. Make sure that you configured a Dialer Setting for the user running the campaign, although there will be a warning for this on the Customer UI: http://your-ip:8008/admin/dialer_settings/dialersetting/

If there is an existing Call Request, check the status, and check the Celery log stored in /var/log/newfies

10.4 Run in debug mode

Make sure you stop the services first:

```
$ /etc/init.d/newfies-celeryd stop
```

Then run in debug mode:

```
$ workon newfies-dialer
$ cd /usr/share/newfies/
$ python manage.py celeryd -EB --loglevel=DEBUG
```

10.5 Celerymon

· https://github.com/ask/celerymon

Running the monitor:

Start celery with the –events option on, so celery sends events for celerymon to capture:: \$ workon newfiesdialer \$ cd /usr/share/newfies/ \$ python manage.py celeryd -E

Run the monitor server:

```
$ workon newfies-dialer
$ cd /usr/share/newfies/
$ python manage.py celerymon
```

However, in production you probably want to run the monitor in the background, as a daemon:

```
$ workon newfies-dialer
$ cd /usr/share/newfies/
$ python manage.py celerymon --detach
```

For a complete listing of the command line arguments available, with a short description, you can use the help command:

```
$ workon newfies-dialer
$ cd /usr/share/newfies/
$ python manage.py help celerymon
```

Now you can visit the webserver celerymon starts by going to: http://localhost:8989

10.6 How to discard all pending tasks

http://docs.celeryproject.org/en/latest/faq.html?highlight=purge#how-do-i-discard-all-waiting-tasks

10.7 Checking Plivo is running

At the command line, type:

```
$ ps aux | grep plivo
```

This should tell you that Plivo-rest, Plivo-Outbound and Plivo-cache are all running. If they are not, these services can be restarted with the following commands:

```
$ /etc/init.d/plivo stop
$ /etc/init.d/plivocache stop
$ /etc/init.d/plivo start
$ /etc/init.d/plivocache start
```

If there are still issues with Plivo, then check the logs for clues at /usr/share/plivo/tmp/

10.8 Checking Freeswitch

Entering the Freeswitch CLI shold indicate whether it is running by typing fs_cli at the console. Once logged in, you can check the trunk registration by typing sofia status at the Freeswitch CLI. CTRL-D exits the Freeswitch CLI.

If the Freeswitch CLI cannot be launched, then the status of freeswitch can be checked with:

```
$ ps aux | grep freeswitch
or
$ /etc/init.d/freeswitch status
```

If Freeswitch is not running, then it can be started with

```
$ /etc/init.d/freeswitch start
```

10.9 Step By Step Checklist

The step by step checklist below should be used to validate that all components of the platform are running.

User interface:

Dialer Gateway matching a configured trunk is set up in the UI

Newfies-Dialer Documentation, Release 1.0/RC3

- 2. Dialer Settings configured and attached to the appropriate user
- 3. Phonebook Created with contacts attached to the phonebook
- 4. Configured voice application
- 5. Campaign created, and started, with a phone book attached, and the campaign schedule current

Backend:

- 1. Celery Monitor Running
- 2. Plivo Running
- 3. Freeswitch running

If there are still problems, then raise a support question on the mailing-list http://groups.google.com/group/newfies-dialer or our forum, http://forum.newfies-dialer.org/, alternatively, contact newfies-dialer@star2billing.com for commercial support.

ELEVEN

RESOURCES

- Getting Help
 - Mailing list
- · Bug tracker
- Wiki
- Contributing
- License

11.1 Getting Help

11.1.1 Mailing list

For discussions about the usage, development, and future of Newfies-Dialer, please join the Newfies-Dialer mailing list

11.2 Bug tracker

If you have any suggestions, bug reports or annoyances please report them to our issue tracker at https://github.com/Star2Billing/newfies-dialer/issues/

11.3 Wiki

https://github.com/Star2Billing/newfies-dialer/wiki/

11.4 Contributing

Development of Newfies-Dialer happens at Github: https://github.com/Star2Billing/newfies-dialer

You are highly encouraged to participate in the development of *Newfies-Dialer*. If you would prefer not to use Github, you are welcome to send us regular patches

Be sure to also read the *contributing* section in the documentation.

11.5 License

This software is licensed under the AGPL License. See the LICENSE file in the top distribution directory for the full license text.

TWELVE

INDICES AND TABLES

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