django-soapbox Documentation

Release 1.4

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Contents

This application provides a simple mechanism for creating and displaying messages – such as announcemnts or site information – on a Django-powered site. Messages can be turned on or off, and can be set to display globally or only on a subset of a site's URLs.

CHAPTER 1

Documentation contents

1.1 Installation guide

Before installing django-soapbox, you'll need to have a copy of Django already installed. For information on obtaining and installing Django, consult the Django download page, which offers convenient packaged downloads and installation instructions.

The 1.4 release of django-soapbox supports Django 1.8, 1.9, and 1.10, on the following Python versions:

- Django 1.8 suports Python 2.7, 3.3, 3.4 and 3.5.
- Django 1.9 supports Python 2.7, 3.4 and 3.5.
- Django 1.10 supports Python 2.7, 3.4 and 3.5.

It is expected that django-soapbox 1.4 will work without modification on Python 3.6 once it is released.

Important: Python 3.2

Although Django 1.8 supported Python 3.2 at the time of its release, the Python 3.2 series has reached end-of-life, and as a result support for Python 3.2 has been dropped from django-soapbox.

1.1.1 Normal installation

The preferred method of installing django-soapbox is via `pip`, the standard Python package-installation tool. If you don't have `pip`, instructions are available for how to obtain and install it. If you're using Python 2.7.9 or later (for Python 2) or Python 3.4 or later (for Python 3), `pip` came bundled with your installation of Python.

Once you have `pip`, simply type:

```
pip install django-soapbox
```

1.1.2 Manual installation

It's also possible to install django-soapbox manually. To do so, obtain the latest packaged version from the listing on the Python Package Index. Unpack the `.tar.gz` file, and run:

```
python setup.py install
```

Once you've installed django-soapbox, you can verify successful installation by opening a Python interpreter and typing `import soapbox`.

If the installation was successful, you'll simply get a fresh Python prompt. If you instead see an `ImportError`, check the configuration of your install tools and your Python import path to ensure django-soapbox installed into a location Python can import from.

1.1.3 Installing from a source checkout

The development repository for `django-soapbox` is at <https://github.com/ubernostrum/django-soapbox>. Presuming you have git installed, you can obtain a copy of the repository by typing:

```
git clone https://github.com/ubernostrum/django-soapbox.git
```

From there, you can use normal git commands to check out the specific revision you want, and install it using `python setup.py install`.

1.2 Usage overview

The goal of django-soapbox is to provide a simple way to display persistent messages on either all pages, specific pages, or a subset of pages on a Django-powered site. To begin using django-soapbox, simply *install it*, then add `soapbox` to your `INSTALLED_APPS` setting and run `manage.py migrate` to install the *`Message`* model.

You can then begin creating *`Message`* instances through the admin interface, indicating which URLs you'd like them to appear on.

1.2.1 Provided models

class `Message`

The core of django-soapbox is the `Message` model, which represents messages to be displayed on your site. This model has four fields and one important custom method:

`message`
: The actual text of the message to display. This can be plain text, or it can include HTML.

`is_active`
: A `BooleanField` (defaults to `True`) indicating whether the message is currently active; only active messages will be retrieved by the standard helpers built in to django-soapbox.

`is_global`
: A `BooleanField` (defaults to `False`) indicating whether the message is global; a global message does not need to have *`url`* (see below) set, and will match any URL.

`url`
: A field to indicate which URL on your site this message should be associated with. Not needed if *`is_global`* is `True`.

`match`(*url*)
: Return `True` if this `Message` matches `url`, `False` otherwise. If `is_global` is `True`, will always return `True`.

class `MessageManager`

Also provided on `Message` is a custom manager, accessible as `Message.objects`, which defines two useful methods:

active()
Returns a QuerySet of all Message instances which have is_active set to True. This is defined as a custom QuerySet method, so it can also be "chained" onto other QuerySets. For example, the following would retrieve all Message instances which are both global and active:

```
Message.objects.filter(is_global=True).active()
```

match(*url*)
Return a list – *not* a QuerySet – of all Message instances which match url.

1.2.2 Validation requirements

While Message instances are relatively freeform, there are two requirements you must abide by; failure to do so will result in validation errors being raised when trying to save the Message:

1. Each Message must either have *is_global* set to True, or specify some URL prefix to match in *url*.
2. A Message cannot have both *is_global* set to True and simultaneously have a URL prefix to match specified in *url* (in other words, a Message can be global, or "local" to some URL prefix, but never both at the same time).

1.2.3 Message URL matching

The message-retrieveal helpers provided in django-soapbox will only retrieve messages which are active and which match a particular URL you pass to them; typically, this will be the URL of the current request. The matching process is case-sensitive and uses the following algorithm, implemented in the *match()* method of Message.

1. If the Message has is_global set to True, immediately return True.
2. Strip leading and trailing slashes from the URL, and from the *url* field of the Message, and split each on internal slashes to yield a list of path components.
3. If the list of components from the url field of the Message is longer than the list from the passed-in URL, immediately return False.
4. Return True if the list of components from the url field, and the corresponding list of components from the beginning of the passed-in URL, are equal. Otherwise, return False.

This means that a Message will match not only a URL which is an exact match for its own url, but also any URL of which its url is a prefix. So, for example, if the url field contained /foo/, it would match on /foo/ *and* on /foo/bar/.

1.2.4 Retrieving and displaying messages

There are two helpers built in to django-soapbox for retrieving and displaying messages in templates.

One is a context processor, which will add a variable soapbox_messages to the context of any template rendered with a RequestContext (required in order to have access to the request path to determine the URL). To enable it, simply add soapbox.context_processors.soapbox_messages to the context processors enabled on your site. See the Django template options documentation for notes on how to do this.

If you prefer to have more fine-grained control of where messages will be retrieved and displayed, django-soapbox provides a template tag, get_soapbox_messages which can retrieve messages for a given URL and place them into a variable in the context. The syntax of the tag is:

```
{% get_messages_for_page [url] as [varname] %}
```

To use the tag, first add `{% load soapbox %}` to the template to load the django-soapbox template tag library, then call the `get_messages_for_page` tag, passing a URL – either a string, or a template variable which the tag will resolve – and the name of the context variable you'd like the message to be placed into. For example (presuming you have a context processor enabled which exposes the current HTTP request to your template):

```
{% load soapbox %}
{% get_messages_for_page request.path as soapbox_messages %}

{% for message in soapbox_messages %}
  <p>Important message: {{ message }}</p>
{% endfor %}
```

1.2.5 What django-soapbox is not

Importantly, django-soapbox is not a system for displaying one-time "flash"-type notifications to an individual user; for that, use Django's built-in message framework. It also is not a system for users to send messages to each other; for that, email or a custom user-message tool is more appropriate.

Instead, django-soapbox is for displaying messages to *all* users, on any URLs the messages match, each time they visit those URLs. Most often this is useful for site-wide or section-specific announcements all users need to see.

1.2.6 Security considerations

The tools provided in django-soapbox are designed around the assumption that only trusted administrators of your site will be permitted to create *`Message`* instances. In particular, a `Message` will, by default, mark its contents as safe for display, and so the Django template system will *not* perform autoescaping of the contents. This is useful for allowing HTML messages – for example, containing links to longer announcements on their own pages – but if opened to arbitrary or untrusted users would be a serious cross-site scripting vulnerability

Because of this, it is recommended that you only use the Django administrative interface to create `Message` instances, and that you carefully restrict the `soapbox.add_message` permission to only a small number of trusted administrators.

CHAPTER 2

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