wafer Documentation

Release 0.16.2a

The wafer development team

Apr 10, 2024

CONTENTS

1	Installation	3
	1.1 Supported versions	3
	1.2 Requirements	3
	1.3 Basic Dev install	3
	1.4 Recommended production setup	4
	1.5 Example setup	4
2	Pages	5
	2.1 Basic pages	5
	2.2 Container pages	5
	2.3 Files	5
	2.4 Maintaining pages in files	5
2		7
3	Talks	7 7
	3.1 Talk Properties 3.2 Talk Types	7 7
		7 7
	3.3 Submitting Talks	
	3.4 Talk Mentors 3.5 Talk Reviewers	8
		8 8
	3.6 Managing talks from the admin interface	8 9
	3.7 Talk tracks	9
	3.8 Talk Reviews	9
	3.9 Talk URLs	9
4	Sponsors	11
		11
		11
	4.3 Files	11
5		13
		13
		13
		13
		13
		14
		14
		14
		14
	5.9 Hiding the schedule while editing	15
6	Menus	17

Contents:

ONE

INSTALLATION

1.1 Supported versions

Wafer supports Django 3.2, 4.0-4.2, 5.0 and Python 3.8 to 3.12.

1.2 Requirements

In addition to Django, wafer has some requirements on external libraries. They're listed in setup.py.

1.3 Basic Dev install

- 1. Install all the dependencies pip install -r requirements.txt
- 2. Create the initial database schema manage.py migrate
- 3. If you don't have one yet, create a superuser with manage.py createsuperuser.
- 4. Wafer uses npm to manage front-end dependencies
 - Make sure you have a recent version of Node.js installed that includes npm.
 - Run npm install to install all dependencies, which also copies them to wafer/static/vendor.
- 5. Wafer uses the Django caching infrastructure in several places, so the cache table needs to be created using manage.py createcachetable.
- 6. Create the default 'Page Editors', 'Talk Mentors', and 'Talk Reviewers' groups using manage.py wafer_add_default_groups.
- 7. Log in and configure the Site:
 - The domain will be used as the base for emails sent during registration.
 - The name will be the conference's name.
 - By default, wafer assumes that the site will be accessible over SSL, so the registration emails will use an 'https' prefix. If this is not the case, override the wafer/registration/activation_email.txt template.
- 8. Ensure the permissions on the MEDIA_ROOT directory are correctly set so the webserver can create new files there. This location is used for files uploaded for pages and sponsor information.
- 9. Have a fun conference.

1.4 Recommended production setup

- 1. Create a new Django app, in your own VCS repository. Add wafer (probably pinned) as a requirement.
- 2. Include wafer's wafer.settings in your settings.py:

```
from wafer.settings import *
TIME_ZONE = 'Africa/Johannesburg'
...
```

- 3. You'll want to include wafer's default values for some settings, e.g. INSTALLED_APPS, rather than completely overriding them. See *Settings* for the wafer-specific settings.
- 4. Override templates as necessary, by putting your own templates directory early in TEMPLATES.
- 5. And then continue with the basic instructions above.

1.5 Example setup

For an example of a conference using wafer, see the 2017 PyCon ZA conference repository, available from github

TWO

PAGES

2.1 Basic pages

Pages are used to describe static information for the conference.

The contents can be formatted using markdown syntax and images can be uploaded using the files field.

The slug defines the last part of the path.

The parent field is used to group the page under specific parts of the namespace. A page with the slug announcements and the parent news will have a URL of /news/announcements

2.2 Container pages

Container pages are created to act as parents for other pages. These should have minimal content, as they will typically not be displayed on the site, and should be excluded from the static site generation.

2.3 Files

Additional files, such as images, can be uploaded so they can be referenced in page. These files are placed in MEDIA_ROOT/pages_files by default. This location needs to be writeable by the webserver for uploads to work.

2.4 Maintaining pages in files

Pages live in the database, and can be edited through the web UI. However, it can be useful to store them in files (e.g. in a git repo, with the site source code).

There is a management command (load_pages) that will read pages from files into the database. It requires PyYAML to be installed.

Pages must be stored as markdown in a directory, in the same hierarchy as the desired URL structure. The PAGE_DIR Django setting should be an absolute path to root directory of this hierarchy, beginning and ending with /. e.g.:

/app/pages/	← PAGE_DIR
/app/pages/index.md	← Home Page: /
/app/pages/about.md	← Container Page: /about/
/app/pages/about	
/app/pages/about/the-conference.md	← /about/the-conference/

Each page starts with a YAML front-matter (similar to Jekyll), and is then followed by the Markdown page body. e.g. pages/index.md:

```
name: Index
....
Welcome to Foo Conf (not Foo Conf, that's another thing entirely)!
We invite you to [join us](/attend/) at [our venue](/venue/)
on the 31st of December for a day of fun conferencing.
```

The front matter can contain a couple of flags:

published

If set to false, the page will not be loaded by the load_pages command.

include_in_menu

If set to true, the page will be added to the menu structure.

menu_order

If set to a number, controls the order in which pages are listed in the menu. Pages with lower values come first.

exclude_from_static

If set to true, the page will not be archived to static HTML by *staticsitegen*.

THREE

TALKS

3.1 Talk Properties

Talks have a title, an abstract / description and authors. These fields will be the publicly visible information about the talk once the talk is accepted.

In addition, talks have a **notes** field, which the submitters can use to provide additional private information about the talk, such as specialised equipment requirements.

The talks also have a **private notes** field that is only visible to organisers, which can be used to track any additional information on the talk, such as assigned reviewers and so forth.

3.2 Talk Types

Before opening up talk submissions, define the talk types available to talk submitters, such as Tutorial, Short Talks and so forth.

Each Talk Type can be opened or closed for submissions individually via the admin interface. Both the global WAFER_TALKS_OPEN setting and the individual Talk Type must be set to allow submissions for submissions of the given type to be accepted.

There is a Django view at /talks/types which displays the list of types and their descriptions. By default, this list isn't linked to the menu, since it's intended to be linked to by pages describing the talks and talk submission process.

3.3 Submitting Talks

Users can submit talks from their profile page using the Submit Talk Proposal option. The abstract can be formatted using Markdown.

The notes section is only visible to the talk author, talk mentors and admins. It is intended for providing extra information and recording developments that are useful to associate with the talk, but should not be public.

Talks can have multiple authors, but only one corresponding author. Only the corresponding author can edit the talk submission.

3.4 Talk Mentors

The "Talk Mentors" group has permission to do the following through the /talks/ (public) talk interface, and the detail pages of each talk:

- View *all* talk submissions (not just accepted talks).
- Edit submitted talks.
- View and edit the notes submitted along with a talk, which are visible to the talk submitter.
- View and edit the private notes which are only visible to the "Talk Mentors", "Talk Reviewers", and administrators by default.

3.5 Talk Reviewers

The "Talk Reviewers" group has permission to do the following through the /talks/ (public) talk interface, and the detail pages of each talk:

- View *all* talk submissions (not just accepted talks).
- View the notes submitted along with a talk, which are visible to the talk submitter.
- View the private notes which are only visible to the "Talk Mentors", "Talk Reviewers", and administrators by default.
- Leave reviews on talks. See Talk Reviews.

3.6 Managing talks from the admin interface

From the admin interface talks can be modified, and the status can be updated as required.

Talks can have following states:

- Submitted
- Under Consideration
- Withdrawn
- · Provisionally Accepted
- Accepted
- Cancelled
- Not Accepted

When a talk is first submitted, the state is set to Submitted.

Once the talk has received its first review, the state of the talk will change to Under Consideration. It can also be changed manually, if not using wafer's review system.

While the talk is either Submitted or Under Consideration, the submitter can withdraw the talk from consideration, which sets the state of the talk to Withdrawn. The submitter can also edit and update the talk abstract while the talk is in these two states.

Once a decision one the talk has been made, the talk should be set to either Accepted or Not Accepted. For conferences where a submitter needs to confirm attendance before the decision is finalised, the status can be set to Provisionally Accepted for talks waiting for confirmation. Once a talk is in any of these states, it can no longer

be edited by the submitter. Not Accepted and Provisionally Accepted talks are not publicly visible, while Accepted talks are public.

If for some reason, an Accepted talk cannot be given, it can be marked as Cancelled. Cancelled talks are still public, so that cancelled a scheduled talk does not invalidate the schedule.

If the talk has a type that has show_pending_submissions enabled, then it will be public immediately after submission, in any of the Submitted, Under Consideration, and Provisionally Accepted states.

3.7 Talk tracks

Wafer optionally supports multiple talk tracks. Create the tracks in the admin interface. If there are multiple tracks, submitters will be asked to choose a track for each submission. If there are no tracks specified, the option will be hidden from the submitter.

Currently, tracks merely provide extra information for talk reviewers and attendees.

There is a Django view at /talks/tracks which displays the list of tracks and their descriptions. As with talk types, this list isn't linked to the menu, since it's intended to be linked to by pages describing the talks and talk submission process.

3.8 Talk Reviews

Talk Mentors can review talks by metrics chosen by the administrators. Create the desired metrics in the admin interface.

Reviewers ("Talk Reviewers" team by default) see a "Review" button on talk pages, and will be prompted to review each talk by each defined metric. The reviews are a score for each metric (in the range of -2 to 2, by default, configurable via WAFER_TALK_REVIEW_SCORES). The reviewer can also leave a textual review, in Markdown.

If a reviewer re-reviews a talk, it just updates the previous review.

The aggregate reviews are visible in the talk admin.

In the public talk listing, reviewers will see a symbol next to talks they have reviewed. It will change to a clock symbol, if their review is out of date (someone has changed the talk, since the review was last updated).

3.9 Talk URLs

URLs can be associated with talks using the admin interface. This is intended for adding links to slides and videos of the talk after the conference.

FOUR

SPONSORS

4.1 Packages

Sponsor packages describe the details of the various sponsor packages available. The order field controls the order in which packages are listed on the sponsor packages page.

4.2 Sponsors

This is used to add details of the sponsors.

The description can be formatted using markdown syntax.

Images can be uploaded and used in the description using the files field.

4.3 Files

Additional files, such as images, can be uploaded so they can be referenced. These files are placed in MEDIA_ROOT/ sponsors_files by default. This location needs to be writeable by the webserver for uploads to work.

4.3.1 Using files in templates

Uploaded files can be associated with a sponsor and a name in the admin interface which can be used with the sponsor_tagged_image templatetag in the templates.

The default wafer sponsor templates expect each sponsor to have an image labelled main_logo for use in the sponsor list.

Wafer also provides an example template block for adding sponsors as a footer to pages called sponsors_footer. This expects images labelled footer_logo.

FIVE

SCHEDULE

5.1 Permissions

Setting up the schedule blocks and using the schedule editor requires access to the admin site.

5.2 Specifying Block and Venues

The first things that need to be specified are the blocks for the schedule and the venues available.

Blocks are the parts that the schedule is divided into. Typically they correspond to days of the conference, but they can be longer or shorter depending on the needs. Each block can be rendered independently of the others, provided there are no errors in the schedule.

Each block has a start and end date and time. These can be on different days, to allow for events that go past midnight.

Each venue is associated with a number of blocks, and is assumed not to be available if it hasn't been assigned to the corresponding block in the schedule. At times when a venue is not available, it will not appear in the schedule.

5.3 Slots

The fundamental unit of the schedule is a schedule slot. Each slot is assigned to a given block, and has a start and end date and time. The start time may be specified as the end time of a different slot using the previous_slot.

The times of a slot must be within the times given for it's associated block.

Each slot can have a name to make it easier to distinguish.

Slots cannot overlap, but items can use multiple slots, so this can be emulated by breaking the slots down into small enough time intervals.

5.4 Assigning items to slots

Each item in the schedule has a number of slots, a venue and either a talk or a page. Each talk can only be assigned to a single schedule item, but pages can be assigned to multiple schedule items to make it easy to add items such as tea breaks to the schedule.

If the schedule item has been assigned to a page, the details field can be used to override the information from the page. For talks, details will be added to the information from the talk.

5.5 Schedule views

The schedule can be restricted to a single block by specifying the day parameter in the URL - e.g. https://localhost/schedule/?day=2014-10-23. If the specified day cannot be matched to one of the blocks in the schedule, the full schedule is shown.

By passing using the highlight-venue parameter in the url, all items in a specific venue will have the schedule-highlight-venue class, which can be used to style these differently - e.g. https://localhost/schedule/?highlight-venue=3 will annotate all items occuring in the venue with the id 3. Invalid ids will be ignored.

The schedule/current view can be used to show events around the current time. The refresh parameter can be used to add a refresh header to the view - e.g https://localhost/schedule/current/?refresh=60 will refresh every 60 seconds.

Note that the current time is the time of the webserver. If this is in a different timezone from the conference, the correct TIME_ZONE value should be set in the settings.py file.

A specific time can be passed via the time parameter to the current view, specified as HH:mm e.g. https://localhost/schedule/current/?time=08:30 will generate the current view for 8:30 am.

5.6 Styling notes

The entry for each talk gets a custom CSS class derived from the talk type. This constructed CSS class is shown in the Talk Type admin view.

Schedule items which are not talks have talk-type-none as the CSS class.

A per item CSS class can also be set using the css_class attribute on the schedule item.

5.7 Adding additional schedule validation

Wafer runs validation on the slots and the schedule items. This behaviour can be extended by providing custom validators.

Each slot validator is called with a list of all the slots, and each schedule item validator is called with a list of all schedule items. Validators are expected to return a list of invalid items or an empty list if the validator finds no error.

Use register_schedule_item_validator and register_slot_validator to add the validators to the list.

To display the errors in the admin form, you will also need to extend the displayerrors block in scheduleitem_list.html and slot_list.html templates.

5.8 Schedule fails to render

To avoid displaying misleading or incorrect information to attendees, the schedule will not be rendered if the schedule fails to validate, and it will display a "The final schedule has not been published" message instead.

Users with permissions to use the schedule editor will see a list of validation errors as well, to help diagnose the problem preventing the schedule from rendering correctly. These errors will also be displayed in the schedule editor and in the admin site.

5.9 Hiding the schedule while editing

The setting WAFER_HIDE_SCHEDULE will prevent the schedule from rendering for users without admin access. Users with admin access will see a note that the schedule is a draft and not public.

SIX

MENUS

6.1 Overview

Wafer includes a simple system for generating either static or dynamic menus for the navigation bar at the top of each page.

A single level of sub-menus is supported.

6.2 Static menus

Static menus are configured using the WAFER_MENUS setting. WAFER_MENUS is a list of either sub-menus or menu items.

Menu items have the following keys:

label

The text displayed for the menu item.

url

The URL the item links to.

sort_key

A value used to sort the list of items into a custom order (optional).

image

An absolute or relative URL to an image to display instead of the label (optional).

Sub-menu have the keys:

menu

The unique name of the sub-menu.

label

The text to display for the sub-menu.

items

A list of menu items in the sub-menu (sub-sub-menus are not supported).

sort_key

A value used to sort the list of items into a custom order (optional).

Example snippet from settings.py:

```
from django.utils.translation import gettext_lazy as _
from django.core.urlresolvers import reverse_lazy
```

(continues on next page)

(continued from previous page)

```
WAFER_MENUS += (
    {"menu": "about", "label": _("About"), "items": []},
    {"name": "venue", "label": _("Venue"),
     "url": reverse_lazy("wafer_page", args=("venue",))},
    {"menu": "sponsors", "label": _("Sponsors"),
     "items": []},
    {"menu": "talks", "label": _("Talks"),
     "items": [
         {"name": "schedule", "label": _("Schedule"),
          "url": reverse_lazy("wafer_full_schedule")},
         {"name": "accepted-talks", "label": _("Accepted Talks"),
          "url": reverse_lazy("wafer_users_talks")},
         {"name": "speakers", "label": _("Speakers"),
          "url": reverse_lazy("wafer_talks_speakers")},
     ]},
}
```

The empty sub-menus are populate dynamically (see the next section).

6.3 Dynamic menus

Dynamic menus are configured using the WAFER_DYNAMIC_MENUS setting. WAFER_DYNAMIC_MENUS is a list of functions or names of functions to call to dynamically add sub-menus or menu items.

Dynamic sub-menus and menu items are added after static ones.

By default, two kinds of menu items are dynamically generated:

- Menus and menu items for pages.
- A menu and menu items for sponsors.

Example snippet from settings.py:

```
WAFER_DYNAMIC_MENUS = (
    'wafer.pages.models.page_menus',
    'wafer.sponsors.models.sponsor_menu',
)
```

6.4 Page menus

Page menus are generated by wafer.pages.models.page_menus. They appear when a page is marked for inclusion in the navigation menu. Each page selected for inclusion as a menu entry with the page name that links to the page. If the page has a parent, it appears in a sub-menu named after its root ancestor.

6.5 Sponsor menu

The sponsor menu is a single sub-menu named **sponsors**. It lists the sponsors in order of precedence with links to their sponsor pages and includes links to the full list of sponsors and the list of sponsorship packages at the bottom of the sub-menu.

SEVEN

STATIC SITE GENERATION

7.1 Usage

The manage.py build command will generate a static version of the site using django-bakery.

The static site will include pages, talks, sponsors and user details.

You need to exclude container pages used for the menus from the static site using the "exclude from static" option in the admin interface, otherwise it will attempt to create files with the same name as the containing directories and the export will fail. If this happens, simply correct the problematic pages and rerun the command.

We suggest setting WAFER_HIDE_LOGIN to True when generating the static site so there is no login button on the static site.

EIGHT

SETTINGS

Wafer has several Django settings that control its behaviour. It attempts to provide reasonable defaults for these, (and Django in general), in the wafer.settings module, so you can import this in your app's settings.py, and then override things you want to change.

8.1 Wafer's settings

CODE_HOSTING_ENTRIES

A dictionary of code hosting sites for the user profile. Entries should be of the form: keyname: "Description".

Each entry in the dictionary will be added as a form field on the profile page - entries are assumed to be for urls to the approriate site.

Entries in this dictionary will be grouped together on the edit profile form and on the profile display.

PAGE_DIR

The directory that the load_pages management command will load pages from. Should be an absolute path with a trailing /.

SOCIAL_MEDIA_ENTRIES

A dictionary of social sites for the user profile. Entries should be of the form: keyname: "Description".

Each entry in the dictionary will be added as a form field on the profile page - entries are assumed to be for urls to the approriate site.

Entries in this dictionary will be grouped together on the edit profile form and on the profile display.

WAFER_CACHE

The name of the Django cache backend that wafer can use. Defaults to 'wafer_cache'.

WAFER_CONFERENCE_ACRONYM

The abbreviated name of the conference.

WAFER_DEFAULT_GROUPS

A list of groups that any new user is automatically added to. This can be used to tweak the default permissions available to website users by creating groups with the required access.

WAFER_DYNAMIC_MENUS

A list of functions to call to generate additional menus.

WAFER_GITHUB_CLIENT_ID

The client ID for GitHub SSO. Used when WAFER_SSO contains 'github'. If you set this up, they'll provide you with one.

WAFER_GITHUB_CLIENT_SECRET

The secret for GitHub SSO. Used when WAFER_SSO contains 'github'. If you set this up, they'll provide you with one.

WAFER_GITLAB_CLIENT_ID

The client ID for GitLab SSO. Used when WAFER_SSO contains 'gitlab'. If you set this up, they'll provide you with one.

WAFER_GITLAB_CLIENT_SECRET

The secret for GitLab SSO. Used when WAFER_SSO contains 'gitlab'. If you set this up, they'll provide you with one.

WAFER_GITLAB_HOSTNAME

The hostname of the GitLab instance used for SSO. Defaults to gitlab.com. Used when WAFER_SSO contains 'gitlab'.

WAFER_HIDE_LOGIN

A boolean flag. When True, the login link in the menu is hidden. This is useful to set, before making a site static.

WAFER_MENUS

Static menu structure for the site. This is a list of dicts, with the keys:

label

The text in the menu.

url

The URL to link to.

items

An optional list of similar dicts, making up a submenu.

WAFER_PAGE_MARKITUP_FILTER

Configuration for django-markitup. The type of markup used for pages, only.

MARKITUP_FILTER is used for rendering other objects. This allows a more relaxed security configuration for pages, where XSS is less of a risk, and embedded HTML markup can be useful for styling.

WAFER_PUBLIC_ATTENDEE_LIST

A boolean flag. When True, all registered users' profiles are publicly visible. Otherwise, only users with associated public talks have public profiles.

WAFER_REGISTRATION_MODE

The mechanisms users will register for the conference, with. Possible options are:

'ticket'

For Quicket integration. The default.

'custom'

For your own implementation. See WAFER_USER_IS_REGISTERED.

WAFER_REGISTRATION_OPEN

A boolean flag. When True, users can register for the conference. (Note, this is not the same as signing up for an account on the website.)

WAFER_SSO

A list of SSO mechanisms in use. Possible options are: 'github', 'gitlab'.

WAFER_TALK_FORM

The form used for talk/event submission. There is a reasonable default form, but this can be changed to customise the submission process.

WAFER_TALK_LANGUAGUES

A tuple of tuples, indicating the languages that users can select when submitting talks. Each tuple has the language code as the first element, and the language name as the second element. Example: (("en", "English"), ("pt", "Portuguese")). The first language listed will be considered the default language, and will be selected by default on new submissions.

WAFER_TALK_REVIEW_SCORES

A tuple of 2 integers. The range of values for talk reviews. Inclusive.

WAFER_TALKS_OPEN

A boolean flag. When True, users can submit talks.

WAFER_TICKETS_SECRET

The secret for the Quicket API. Used when WAFER_REGISTRATION_MODE is 'ticket'.

WAFER_USER_IS_REGISTERED

A function, which takes a user, and determines if they have registered for attendance at the conference. It should return a boolean result. The default function checks for a Quicket ticket.

WAFER_USER_TICKET_TYPES

A function which returns a list of ticket types associated with a user. This is intende to help track remote vs in-person tickets and similar cases. It should return a list of ticket type descriptions. The default function returns the types of any Quicket tickets associated with the user.

WAFER_VIDEO

A boolean flag. When True, the default talk submission form will ask for a video release from the submitter.

WAFER_VIDEO_LICENSE

The name of the license that the conference's videos will be released under. Talk submitters will be asked to release their video under this license.

WAFER_VIDEO_LICENSE_URL

Link to the full text of WAFER_VIDEO_LICENSE.

WAFER_VIDEO_REVIEWER

A boolean flag. When True, the default talk submission form will ask for the email address of someone who will review the talk's video, once it is ready to publish.

8.2 Third party settings

Some libraries that wafer uses have settings that you may want to configure. This is a non-complete list of them, see the individual project's documentation for more details.

ACCOUNT_ACTIVATION_DAYS

Used by django-registration-redux. Number of days that users have to click the account activation link that was emailed to them.

MARKITUP_FILTER

Configuration for django-markitup. The type of markup used for talk abstracts, user profiles, and other things. Also, configuration for the conversion, such as allowing arbitrary HTML embedding.

WAFER_PAGE_MARKITUP_FILTER is used for rendering pages, which usually have a lower security risk to other markup on the site.

BUILD_DIR

Used by django-bakery. The directory that static versions of the sites are rendered to.

REGISTRATION_OPEN

Boolean flag. Used by django-registration-redux. When True, user sign-up is permitted.

REGISTRATION_FORM

Dotted path. Used by django-registration-redux. WaferRegistrationForm to validate usernames.

We provide wafer.registration.forms.

NINE

TRANSLATIONS

9.1 Translating wafer

Translations for wafer are managed at weblate.org

9.2 Managing translations

The summary is:

- Add weblate as a remote git remote add weblate https://hosted.weblate.org/git/wafer/wafer/
- Pull weblate updates git remote update weblate
- Merge translations into wafer git merge weblate/master
- Fix any merge issues and create a PR on github

See the `weblate`_ documentation for more details on how to pull and merge translations.

To regenerate the django.pot file, use ./manage.py makemessages --keep-pot.

TEN

INDICES AND TABLES

- genindex
- modindex
- search