django-dash Documentation

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Contents

django-dash (later on named Dash) is a customisable, modular dashboard application framework for Django.

Dash allows users to create their own custom dashboards. Supports theming (in Dash themes are called layouts) and multiple workspaces. Dash comes with extensive pythonic API which allows developers to create new Dash plugins, as well as to modify bundled ones.

To make a clearer association, think of Android for tablets (shortcuts, widgets and apps) or Windows 8 for tablets or desktops.

Dash inherits all those concepts and makes it possible to implement a dashboard system for Django applications with minimal efforts.

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CHAPTER 1

Prerequisites

- Django 1.5.+
- Python 2.6.8+, 2.7.+, 3.3.+

Key concepts

- Each layout (theme) consist of placeholders. Each plugin widget has its' own specific HTML/JavaScript/CSS.
- There might be multiple themes implemented and installed, but only one can be active for a certain user. Default layout is chosen system wide, but each user (if has an appropriate permission) can choose his preferred layout.
- Placeholder is a space, in which the plugin widgets are placed.
- Placeholders are rectangles consisting of cells. Each placeholder has its' own custom number of rows and columns.
- Workspace is just another named dashboard. Users switch between workspaces in navigation. Amount of workspaces is unlimited.
- Plugin is a (Django) micro app. Most heavy work should happen in plugin. Plugin may have its' own views, urls, etc. Rendering happens with use of plugin widgets.
- Plugin widgets are mainly responsible for rendering of the plugin data. Each plugin widget has its' own specific HTML/JavaScript/CSS. A single plugin widget is registered for a triple (layout, placeholder, plugin).
- Public dashboard (implemented as a contrib app, which makes it optional) allows users to make their workspaces public. If user chooses to make his dashboard public, default workspace becomes public. As for non-default workspaces, user can still make each of them private or public.

Main features

- Customisable layouts (aka theeming).
- Multiple workspaces.
- Tunable access permissions to plugins.
- Public dashboards (as a contrib app).

Installation

1. Install latest stable version from PyPI:

\$ pip install django-dash

Or latest stable version from GitHub:

\$ pip install -e git+https://github.com/barseghyanartur/django-dash@stable#egg=django-dash

Or latest stable version from BitBucket:

\$ pip install -e hg+https://bitbucket.org/barseghyanartur/django-dash@stable#egg=django-dash

2. Add *dash* to INSTALLED_APPS of the your projects' Django settings. Furthermore, all layouts and plugins to be used, shall be added to the INSTALLED_APPS as well.

```
>>> INSTALLED_APPS = (
        # ...
        'dash',
>>>
>>>
        'dash.contrib.layouts.android',
        'dash.contrib.layouts.windows8',
>>>
       'dash.contrib.plugins.dummy',
>>>
>>>
       'dash.contrib.plugins.memo',
       'dash.contrib.plugins.news',
        'dash.contrib.plugins.rss_feed',
        'dash.contrib.plugins.url',
>>>
        'dash.contrib.plugins.video',
>>>
        'dash.contrib.plugins.weather',
>>>
>>>
>>> )
```

3. Make sure that django.core.context_processors.request is in TEMPLATE_CONTEXT_PROCESSORS.

Demo

In order to be able to quickly evaluate the *django-dash*, a demo app (with a quick installer) has been created (works on Ubuntu/Debian, may work on other Linux systems as well, although not guaranteed). Follow the instructions below for having the demo running within a minute.

Grab the latest *django_dash_example_app_installer.sh*:

\$ wget https://raw.github.com/barseghyanartur/django-dash/stable/example/django_dash_example_app_installer.sh

Create a new- or switch to existing- virtual environement:

\$ virtualenv dash

\$ source dash/bin/activate

Assign execute rights to the installer and run the *django_dash_example_app_installer.sh*:

\$ chmod +x django_dash_example_app_installer.sh

\$./django_dash_example_app_installer.sh

Open your browser and test the app.

Dashboard:

• URL: http://127.0.0.1:8001/dashboard/

• Admin username: test_admin

· Admin password: test

Django admin interface:

• URL: http://127.0.0.1:8001/administration/

• Admin username: test_admin

• Admin password: test

Take a look at the templates in "example/example/templates" directory for getting a better idea of how to transform your own- or thirdy-part- templates into Dash templates.

 $See \ the \ documentation \ for \ some \ screen \ shots \ http://pythonhosted.org/django-dash/\#screenshots$

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Creating a new layout

Dash comes with several bundled layouts. Do check their source code as example.

Let's say, our imaginary layout has two placeholders. One large placeholder for all kinds of widgets (called *main*) and a tiny one for shortcuts (called *shortcuts*).

Placeholder main:

• Single cell size: 150 x 110 pixels

• Dimensions: 6 cols, 5 rows

Placeholder shortcuts:

• Single cell size: 60 x 55 pixels

• Dimensions: 1 cols, 10 rows

See the figure below to get an idea of what placeholders are:

- Placeholder *main* consts of cells from 11 to 56.
- Placeholder *shortcuts* consists of cells from 1 to 10.

A single plugin widget may occupy one or more cells. Plugin widgets are rectangles.

To make it clear, see following cases:

- Plugin widget has 2 cols and 1 row. Then, for example, it may occupy cells (11 and 12).
- Plugin widget has 2 cols and 2 rows. Then, for example, it may occupy cells (11, 12, 21 and 22).
- Plugin widget has 1 col and 3 rows. Then, for example, it may occupy cells (11, 21 and 31).
- Plugin widget has 4 cols and 3 rows. Then, for example, it may occupy cells (22, 23, 24, 25, 32, 33, 34, 35, 42, 43, 44 and 45).

| >>> | | 'main' | | | | | | | | `shor | tcuts' | |
|-----|----|--------|--|----|--|----|---|----|--|-------|--------|---|
| >>> | | | | | | | | | | | | |
| >>> | 1 | | | | | | | | | | | 1 |
| >>> | 1 | | | | | | | | | | | |
| >>> | 11 | 12 | | 13 | | 14 | - | 15 | | 16 | | |
| >>> | 1 | | | | | | - | | | | | 2 |
| >>> | 1 | | | | | | - | | | | | |
| >>> | | | | | | | | | | | | |
| >>> | 1 | | | | | | | | | | | |

| >>> | | | | | | | 3 |
|--------------|-----|-------|-----|-------|-------|-------|---------|
| >>> | 21 | 22 | 23 | 24 | 25 | 26 | |
| >>> | | | | | | | 4 |
| >>> | | | | | | | |
| >>> | | | | | | | - |
| >>> | | | | | | | |
| >>> | | | | | | | 5 |
| >>> | 31 | 32 | 33 | 34 | 35 | 36 | |
| >>> | | | | | | | 6 |
| >>> | | | | | | | |
| >>> | | | | | | | - |
| >>> | | | | | | | |
| >>> | 4.1 | | 4.0 | | 1 45 | 1.0 | / |
| >>> | 41 | 42 | 43 | 44 | 45 | 46 | |
| >>> | | | | | 1 | 1 | 0 |
| >>> >>> | | | | | | · | |
| >>> | | ı ı | | I | 1 | I | 1 1 1 |
| >>> | | | | I | | I | 1 1 9 1 |
| >>> | 51 | 52 | 53 | 54 | 55 | 56 | |
| >>> | | | | 1 | 1 | . 30 | 10 |
| >>> | | · | | ' | | 1 | |
| >>> | | · | | ' | · | | - |

There are some rules/guideles you should follow.

Let's assume that layout is named example. The layout directory should then have the following structure.

```
>>> path/to/layout/example/
>>> -- static
>>> | -- css
>>> | | -- dash_layout_example.css # Contains layout-specific CSS
>>> | -- images
>>> | -- js
>>> | -- dash_layout_example.js # Contains layout specific JavaScripts
>>> -- templates
>>> | -- example
>>> | -- edit_layout.html # Master edit layout
>>> | -- view_layout.html # Master view layout
>>> -- __init__.py
>>> -- dash_layouts.py # Where Layouts and Placeholders are defined and registered
```

Layout and placeholder classes should be placed in the dash_layouts.py file.

Each layout should be put into the INSTALLED_APPS of your Django projects' settings module.

```
>>> INSTALLED_APPS = (
>>>  # ...
>>> 'path.to.layout.example',
>>>  # ...
>>> )
```

6.1 path/to/layout/example/dash_layouts.py

Step by step review of a how to create and register a layout and placeholders. Note, that Dash autodiscovers your layouts by name of the file *dash_layouts.py*. The module, in which the layouts are defined, has to be named *dash_layouts.py*.

Required imports.

```
>>> from dash.base import BaseDashboardLayout, BaseDashboardPlaceholder
>>> from dash.base import layout_registry
Defining the Main placeholder.
>>> class ExampleMainPlaceholder (BaseDashboardPlaceholder):
      uid = 'main' # Unique ID of the placeholder.
      cols = 6 # Number of columns in the placeholder.
>>>
      rows = 5 # Number of rows in the placeholder.
      cell_width = 150 # Width of a single cell in the placeholder.
>>>
      cell_height = 110 # Height of a single cell in the placeholder.
>>>
Defining the Shortcuts placeholder.
>>> class ExampleShortcutsPlaceholder (BaseDashboardPlaceholder):
        uid = 'shortcuts' # UID of the placeholder.
>>>
        cols = 1 # Number of columns in the placeholder.
        rows = 10 # Number of rows in the placeholder.
>>>
        cell_width = 60 # Width of a single cell in the placeholder.
>>>
        cell_height = 55 # Height of a single cell in the placeholder.
>>>
```

Defining and registering the Layout.

```
>>> class ExampleLayout (BaseDashboardLayout):
>>>
        uid = 'example' # Layout UID.
        name = 'Example' # Layout name.
>>>
>>>
>>>
        # View template. Master template used in view mode.
        view_template_name = 'example/view_layout.html'
>>>
>>>
>>>
        # Edit template. Master template used in edit mode.
        edit_template_name = 'example/edit_layout.html'
>>>
>>>
        # All placeholders listed. Note, that placeholders are rendered in the
>>>
>>>
        # order specified here.
        placeholders = [ExampleMainPlaceholder, ExampleShortcutsPlaceholder]
>>>
>>>
>>>
        # Cell units used in the entire layout. Allowed values are: 'px', 'pt',
        # 'em' or '%'. In the 'ExampleMainPlaceholder' cell_width is set to 150.
>>>
        # It means that in this particular case its' actual width would be '150px'.
>>>
>>>
        cell_units = 'px'
>>>
        # Layout specific CSS.
        media_css = ('css/dash_layout_example.css',)
>>>
        # Layout specific JS.
>>>
        media_js = ('js/dash_layout_example.js',)
>>>
>>>
>>> # Registering the layout.
>>> layout_registry.register(ExampleLayout)
```

6.2 HTML templates

You custom layout should be interited from base layout templates (view or edit). Both view and edit layouts share a lot of things, still edit layout is a bit more "heavy".

- view_layout.html should inherit from "dash/layouts/base_view_layout.html".
- edit layout.html should inherit from "dash/layouts/base edit layout.html".

Both "dash/layouts/base_view_layout.html" and "dash/layouts/base_edit_layout.html" inherit from "dash/layouts/base_layout.html", which in its' turn inherits from "dash/base.html".

Note, that when rendered to HTML, each Dash template, gets a body class "layout" + layouts' unique identifier (UID). So, the ExampleLayout layout would automatically get the class "layout-example".

```
<body class="layout-example">
```

In case of Android layout (UID "android") it would be as follows.

```
<body class="layout-android">
```

Base your layout specific custom CSS on presence of those classes.

Same goes for Placeholders. Each placeholder gets id_{-} + placeholders' UID and the classes "placeholder" and "placeholder-" + placeholders' UID. So, the <code>ExampleMainPlaceholder</code> would look as follows.

```
<div id="id_main" class="placeholder placeholder-main">
```

And the ExampleShortcutsPlaceholder placeholder would look as follows.

```
<div id="id_shortcuts" class="placeholder placeholder-shortcuts">
```

Same goes for plugin widgets. Apart from some other classes that each plugin widget would get for positioning, it gets the "plugin" and "plugin-" + plugin UID. See the following example (for the plugin Dummy with UID "dummy"). Each plugin also gets an automatic UID on the moment when rendered. In the example below it's the "p6d06f17d-e142-4f45-b9c1-893c38fc2b01".

```
<div id="p6d06f17d-e142-4f45-b9c1-893c38fc2b01" class="plugin plugin-dummy">
```

Layout, placeholder, plugin and plugin widget have properties for getting their HTML specific classes and IDs.

Layout (instance)

```
>>> layout.html_class
```

Placeholder (instance)

```
>>> placeholder.html_id
>>> placeholder.html_class
```

Plugin (instance)

```
>>> plugin.html_id
>>> plugin.html_class
```

Plugin widget (static call)

```
>>> plugin_widget.html_class # Static one
```

Creating a new plugin

Dash comes with several bundled plugins. Do check their source code as example.

Making of a plugin or a plugin widget is quite simple, although there are some rules/guideles you should follow.

Let's assume that plugin is named sample_memo. The plugin directory should then have the following structure.

Note, that you are advised to prefix all your plugin specific media files with *dash_plugin_* for the sake of common sense.

```
>>> path/to/plugin/sample_memo/
>>> -- static
>>> |
>>> |
       | -- dash_plugin_sample_memo.css # Plugin specific CSS
>>> |
       -- images
>>> | -- js
           -- dash_plugin_sample_memo.js # Plugin specific JavaScripts
>>> |
>>> -- templates
>>> | -- sample_memo
           -- render_main.html # Plugin widget templ. for 'main' Placeholder
           -- render_short.html # Plugin widget templ. for 'shortcuts' Placeholder
>>> -- __init__.py
>>> -- dash_plugins.py # Where plugins and widgets are defined and registered
>>> -- dash_widgets.py # Where the plugin widgets are defined
>>> -- forms.py # Plugin configuration form
```

In some cases, you would need plugin specific overridable settings (see dash.contrib.plugins.weather plugin as an example. You are advised to write your settings in such a way, that variables of your Django project settings module would have <code>DASH_PLUGIN_</code> prefix.

7.1 path/to/plugin/sample_memo/dash_plugins.py

Step by step review of a how to create and register a plugin and plugin widgets. Note, that Dash autodiscovers your plugins if you place them into a file named *dash_plugins.py* of any Django app listed in INSTALLED_APPS of your Django projects' settings module.

7.1.1 Define and register the plugin

Required imports.

```
>>> from dash.base import BaseDashboardPlugin, plugin_registry
>>> from path.to.plugin.sample_memo.forms import SampleMemoForm
```

Defining the Sample Memo plugin.

```
>>> class SampleMemoPlugin(BaseDashboardPlugin):
>>> uid = 'sample_memo' # Plugin UID
>>> name = _("Memo") # Plugin name
>>> group = _("Memo") # Group to which the plugin belongs to
>>> form = SampleMemoForm # Plugin forms are explained later
```

Registering the Sample Memo plugin.

```
>>> plugin_registry.register(SampleMemoPlugin)
```

7.1.2 Register plugin widgets

Plugin widgets are defined in *dash_widgets.py* module (described later), but registered in the *dash_plugins.py*, which is autodiscovered by Dash.

Required imports.

```
>>> from dash.base import plugin_widget_registry
>>> from path.to.plugin.sample_memo.dash_widgets import (
>>> SampleMemoExampleMainWidget, SampleMemoExampleShortcutWidget
>>> )
```

Registering the Sample Memo plugin widgets for Layout *example*.

```
>>> plugin_widget_registry.register(SampleMemoExampleMainWidget)
>>> plugin_widget_registry.register(SampleMemoExampleShortcutWidget)
```

7.2 path/to/plugin/sample_memo/dash_widgets.py

Why to have another file for defining widgets? Just to keep the code clean and less messy, although you could perfectly define all your plugin widgets in the module *dash_plugins.py*, it's recommended to keep it separate.

Take into consideration, that *dash_widgets.py* is not an autodiscovered file pattern. All your plugin widgets should be registered in modules named *dash_plugins.py*.

Required imports.

```
>>> from django.template.loader import render_to_string
>>> from dash.base import BaseDashboardPluginWidget
```

Memo plugin widget for Example layout (Placeholder main).

```
>>> class SampleExampleMemoExampleMainWidget (BaseDashboardPluginWidget):
>>> layout_uid = 'example' # Layout for which the widget is written
>>> placeholder_uid = 'main' # Placeholder within the layout for which
>>> # the widget is written
>>> plugin_uid = 'sample_memo' # Plugin for which the widget is written
>>> cols = 2 # Number of widget columns
```

```
>>> rows = 2 # Number of widget rows
>>>
>>>
context = {'plugin': self.plugin}
>>> return render_to_string('sample_memo/render_main.html', context)

Memo plugin widget for Example layout (Placeholder shortcuts).
>>> class SampleMemoExampleShortcutWidget (SampleMemoExampleMainWidget):
>>> placeholder_uid = 'shortcuts'
>>> cols = 1
>>> rows = 1
```

7.3 path/to/plugin/sample memo/forms.py

context = {'plugin': self.plugin}

def render(self, request=None):

What are the plugin forms? Very simple - if plugin is configurable, it has a form. If you need to have a custom CSS or a JavaScript included when rendering a speicifc form, use Django's class Media directive in the form.

return render_to_string('sample_memo/render_shortcuts.html', context)

Required imports.

>>>

>>>

```
>>> from django import forms
>>> from dash.base import DashboardPluginFormBase
Memo form (for Sample Memo plugin).
```

```
>>> class SampleMemoForm(forms.Form, DashboardPluginFormBase):
        plugin_data_fields = [
            ("title", ""),
>>>
            ("text", "")
>>>
        1
>>>
>>>
>>>
        title = forms.CharField(label=_("Title"), required=False)
        text = forms.CharField(label=_("Text"), required=True, \
>>>
                                widget=forms.widgets.Textarea)
>>>
>>>
        def __init__(self, *args, **kwargs):
            super(MemoForm, self).__init__(*args, **kwargs)
>>>
```

Now, that everything is ready, make sure your that both layout and the plugin modules are added to INSTALLED_APPS for your projects' Django settings.

```
>>> INSTALLED_APPS = (
>>>  # ...
>>>  'path.to.layout.example',
>>>  'path.to.plugin.sample_memo',
>>>  # ...
>>> )
```

After it's done, go to terminal and type the following command.

\$./manage.py dash_sync_plugins

If your HTTP server is running, you would then be able to access your dashboard.

- View URL: http://127.0.0.1:8000/dashboard/
- Edit URL: http://127.0.0.1:8000/dashboard/edit/

Note, that you have to be logged in, in order to use the dashboard. If your new plugin doesn't appear, set the DASH_DEBUG to True in your Django's local settings module, re-run your code and check console for error notifications.

Permissions

Plugin system allows administrators to specify the access rights to every plugin. Dash permissions are based on Django Users and User Groups. Access rights are managable via Django admin (/administration/dash/dashboardplugin/). Note, that your admin URL prefix may vary from the one given in example (it's usually "/admin/", while in example it's "/administration/"). If user doesn't have the rights to access plugin, it doesn't appear on his dashboard even if has been added to it (imagine, you have once granted the right to use the news plugin to all users, but later on decided to limit it to Staff members group only). Note, that superusers have access to all plugins.

| >>> | Plugin access rights | _ | | _ | _ | |
|-----------------|---------------------------|-------------|---------------|---|-----------------|---|
| >>> ' P | | ` Us | sers' | 1 | 'Groups' | I |
| >>> Vi | deo (big_video) | Joh | nn Doe | 1 | Dashboard users | |
| >>> Ti | nyMCE memo (tinymce_memo) | | | | Dashboard users | 1 |
| >>> Ne | ws (news) | Osc | car, John Doe | | Staff members | 1 |
| >>> UR | | | | 1 | Dashboard users | I |
| >>> Vi | deo (video) | I | | 1 | Dashboard users | I |
| >>> Du | mmy (dummy) | 1 | | | Testers | I |
| >>> Du | mmy (large_dummy) | | | 1 | Testers | I |
| >>> Me | mo (big_memo) | | | 1 | Dashboard users | |

Management commands

There are several management commands.

- dash_find_broken_dashboard_entries. Find broken dashboard entries that occur when some plugin which did exist in the system, no longer exists.
- dash_sync_plugins. Should be ran each time a new plugin is being added to the Dash.
- dash_update_plugin_data. A mechanism to update existing plugin data in case if it had become invalid after a change in a plugin. In order for it to work, each plugin should implement and update method, in which the data update happens.

Tuning

There are number of Dash settings you can override in the settings module of your Django project:

- DASH_RESTRICT_PLUGIN_ACCESS (bool): If set to True, (Django) permission system for dash plugins is enabled. Defaults to True. Setting this to False makes all plugins available for all users.
- DASH_ACTIVE_LAYOUT (str): Active (default) layout UID. Defaults to "android".
- DASH_LAYOUT_CELL_UNITS (str): Allowed values for layout cell units. Defaults to ("em", "px", "pt", "%").
- DASH_DISPLAY_AUTH_LINK (bool): If set to True, the log out link is shown in the Dash drop-down menu. Defaults to True.

For tuning of specific contrib plugin, see the docs in the plugin directory.

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Styling tips

Font Awesome is used for icons. As a convension, all icons of font-awesome are placed within a span. Next to their original class, they all should be getting an extra class "iconic". Follow that rule when making a new layout or a plugin (HTML). It allows to make the styling easy, since icon colours could be then changed within no time.

Bundled plugins and layouts

Dash ships with number of bundled (demo) plugins and layouts that are mainly made to demonstrate its' abilities. In order to work amoung various layouts (themes), each plugin has a single widget registered for a single layout. It's possible to unregister a bundled widget and replace it with a custom one.

12.1 Bundled plugins

Below a short overview of the plugins. See the README.rst file in directory of each plugin for details.

- Dummy plugin. Mainly made for quick testing. Still, is perfect example of how to write a plugin and widgets. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/dummy
- Memo plugin. Allows users to put short notes on their dashboard. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/memo
- News plugin. Shows how to embed your Django news application (front-end part of it) into a Dash plugin widget. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/news
- RSS feed plugin. Allows users to put any RSS feed right into the dashboard. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/rss_feed
- URL plugin. Allows users to put links to their dashboard. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/url
- Video plugin. Allows users to put YouTube or Vimeo videos to their dashboard. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/video
- Weather plugin. Allows to put a weather widget into dashboard. https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/plugins/weather

12.2 Bundled layouts

Below a short overview of the layouts. See the README.rst file in directory of each layout for details.

• Android (like) layout. Has two placeholders: main (6 cols x 5 rows, each block sized 150x110 px) and shortcuts (1 col x 10 rows, each block sized 60x55 px). https://github.com/barseghyanartur/django-dash/tree/stable/src/dash/contrib/layouts/android

• Windows 8 (like) layout. Has two placeholders: main (6 cols x 4 rows, each block sized 140x135 px) and sidebar (2 cols x 4 rows, each block sized 140x135 px). https://github.com/barseghyanartur/djangodash/tree/stable/src/dash/contrib/layouts/windows8

Naming conventions

Although you are free to name your plugins and widgets as you want (except that you should comply with PEP http://www.python.org/dev/peps/pep-0008/#function-names), there are some naming conventions introduced, that you are recommended to follow.

TinyExampleWidget: 1x1SmallExampleWidget: 2x2

ExampleWidget: 3x3
BigExampleWidget: 4x4
HugeExampleWidget: 5x5
GiganticExampleWidget: 6x6

When making non-square widgets (2x1, 1x2, 3x1, 1x3), add *Portrait* and *Landscape* to the name for better identification.

License

GPL 2.0/LGPL 2.1

Support

For any issues contact me at the e-mail given in the *Author* section.

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|----------|-----|-----|----|---|
| \sim u | V D | TED | _ | h |
| СΠ | AF | IEN | | u |

Author

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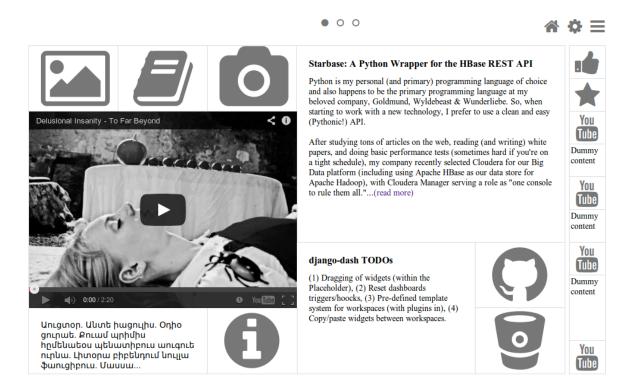
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Screenshots

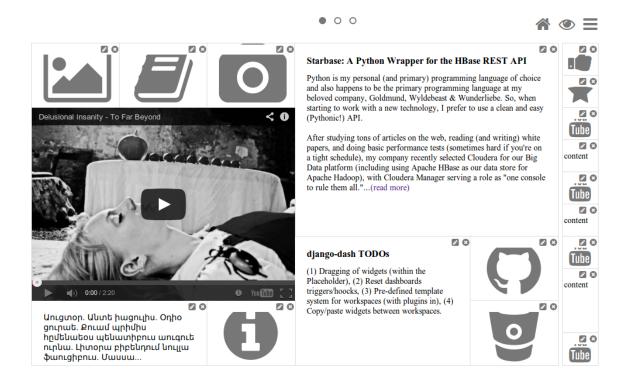
Several screenshots of Android layout are presented below.

Dashboard workspace (view mode) on which you can see the following plugins used:

- URL plugin
- TinyMCE Memo plugin
- · Memo plugin
- Video plugin

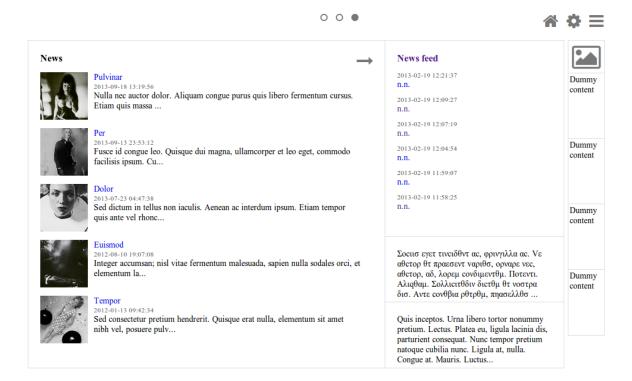


Dashboard workspace (edit mode), which is a edit mode of the previous dashboard workspace.

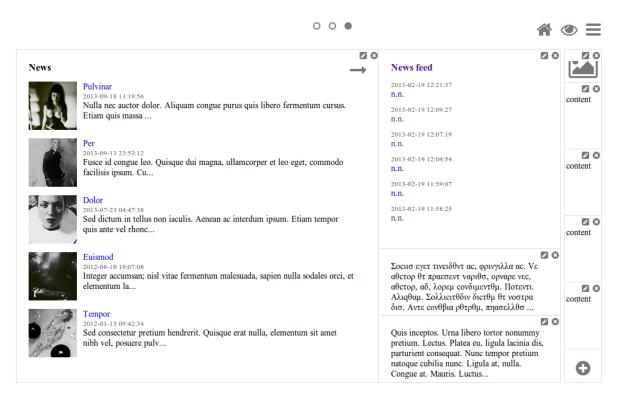


Dashboard workspace (view mode) on which you can see the following plugins used:

- · News plugin
- RSS feed plugin
- · Dummy plugin
- URL plugin



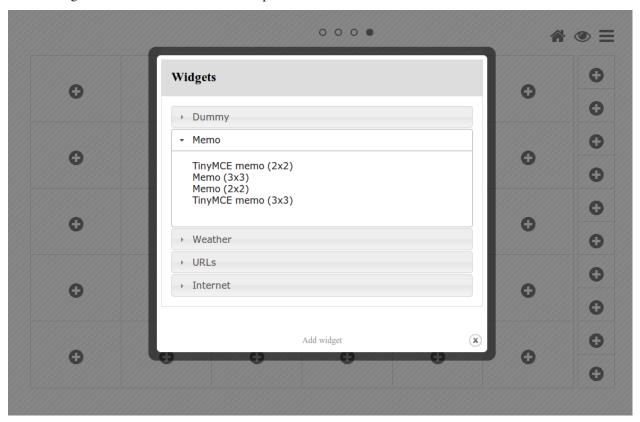
Dashboard workspace (edit mode), which is a edit mode of the previous dashboard workspace.



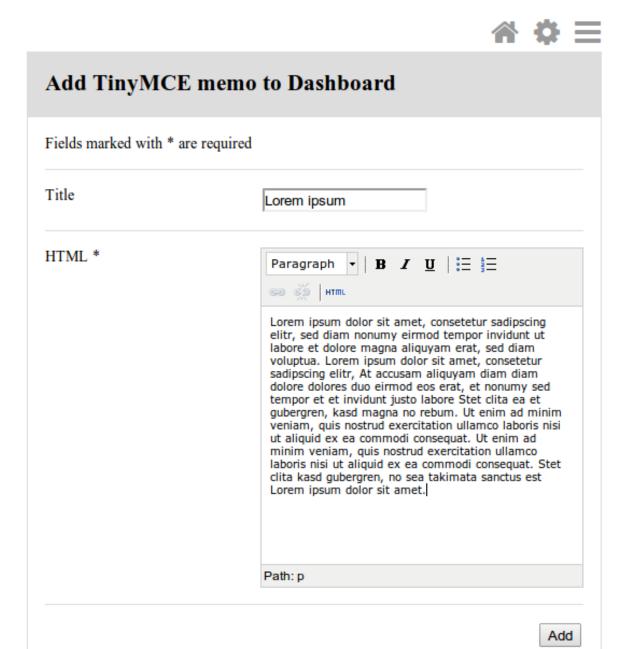
Dashboard workspace (edit mode) is an empty dashboard workspace in edit mode.



Choose widget to added to the dashboard workspace.

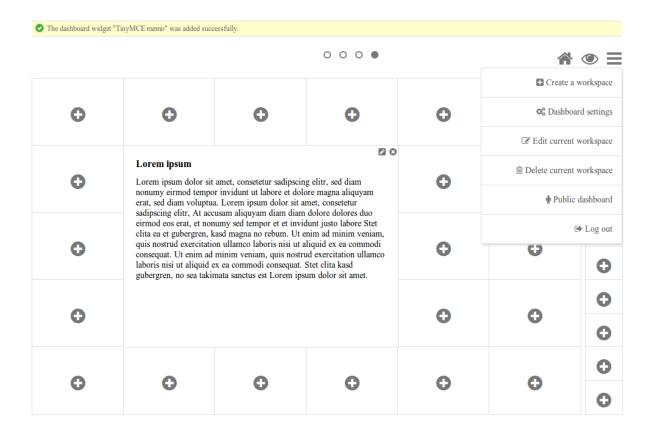


TinyMCE plugin widget form

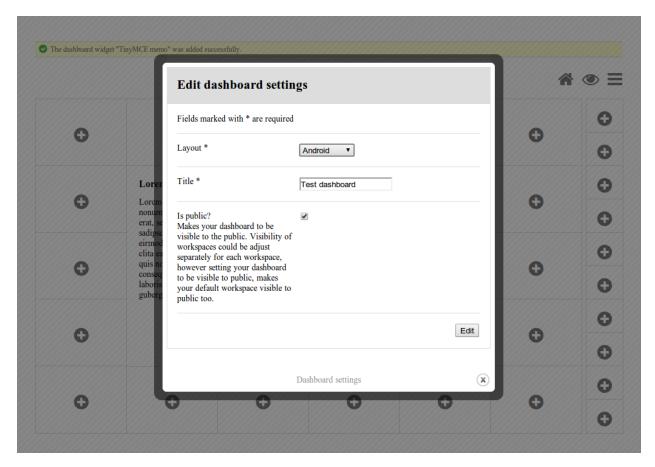


Dashboard workspace (edit mode) on which the TinyMCE plugin widget has been just added. Menu is unfolded.

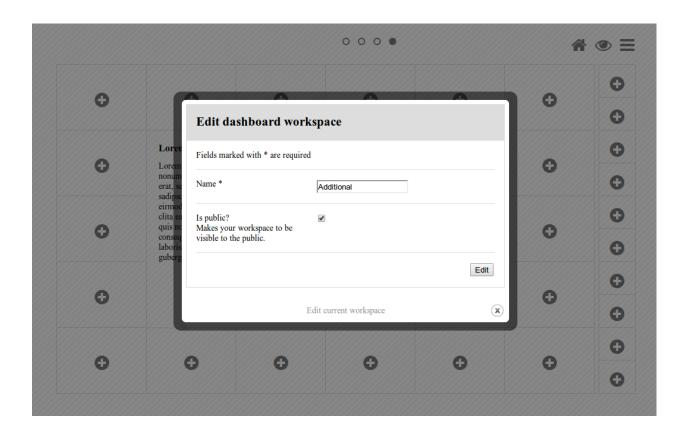
TinyMCE tags are available here.



A form to edit global dashboard settings.



A form to edit settings of current dashboard workspace.



Documentation!

Contents:

18.1 dash package

18.1.1 Subpackages

dash.contrib package

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Subpackages

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Submodules

 $dash.contrib.apps.public_dashboard.urls\ module$

dash.contrib.apps.public_dashboard.views module

dash.contrib.apps.public_dashboard.views.**public_dashboard**(request, username, workspace=None, tem-

Public dashboard.

Parameters

- django.http.HttpRequest -
- username (str) –
- workspace (str) Workspace slug.

plate_name='public_dashboard/public_dashboard

• template_name (str) – Return django.http.HttpResponse

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|---|
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| Module contents |
| dash.contrib.plugins package |
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| |

```
dash.contrib.plugins.dummv.dash plugins module
class dash.contrib.plugins.dummy.dash_plugins.DummyPlugin(layout_uid,
                                                                                  place-
                                                                  workspace=None,
                                                                  user=None,
                                                                                   posi-
                                                                  tion=None)
    Bases: dash.base.BaseDashboardPlugin
    Dummy dashboard plugin.
    form
         alias of DummyForm
    get_form()
    group = <django.utils.functional.__proxy__ object at 0x41a72d0>
    name = <django.utils.functional.__proxy__ object at 0x41a7490>
    post processor()
         If no text available, use dummy.
    uid = 'dummy'
dash.contrib.plugins.dummy.dash_widgets module
class dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget (plugin)
    Bases: dash.base.BaseDashboardPluginWidget
    Dummy plugin widget for Android layout (placeholder main).
    layout uid = 'android'
    media css = []
    media_js = []
    placeholder_uid = 'main'
    plugin_uid = 'dummy'
    render (request=None)
class dash.contrib.plugins.dummy.dash_widgets.DummyAndroidShortcutWidget(plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget
    Dummy plugin widget for Android layout (placeholder shortcuts).
    placeholder_uid = 'shortcuts'
    render (request=None)
class dash.contrib.plugins.dummy.dash_widgets.DummyWindows8MainWidget(plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget
    Dummy plugin widget for Windows8 (placeholder main).
    layout_uid = 'windows8'
class dash.contrib.pluqins.dummy.dash_widqets.DummyWindows8SidebarWidqet(plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyWindows8MainWidget
    Dummy plugin widget for Windows8 (placeholder sidebar).
    layout_uid = 'windows8'
    placeholder_uid = 'sidebar'
```

```
class dash.contrib.plugins.dummy.dash_widgets.LargeDummyAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget
    Large dummy plugin widget for Android (placeholder main).
    cols = 2
    plugin uid = 'large dummy'
    rows = 1
class dash.contrib.plugins.dummy.dash_widgets.LargeDummyPortraitAndroidMainWidget(plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget
    Large dummy portrait plugin widget for Android (placeholder main).
    cols = 1
    plugin_uid = 'large_dummy_portrait'
    rows = 2
class dash.contrib.plugins.dummy.dash_widgets.LargeDummyPortraitAndroidShortcutWidget (plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidShortcutWidget
    Large dummy portrait plugin widget for Android (placeholder shortcuts).
    cols = 1
    plugin uid = 'large dummy portrait'
    rows = 2
class dash.contrib.plugins.dummy.dash_widgets.BigDummyAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.dummy.dash_widgets.DummyAndroidMainWidget
    Big dummy portrait plugin widget for Android (placeholder main).
    cols = 3
    plugin_uid = 'big_dummy'
    rows = 3
dash.contrib.plugins.dummy.defaults module
dash.contrib.plugins.dummy.forms module
class dash.contrib.plugins.dummy.forms.DummyForm (data=None,
                                                                               files=None,
                                                        auto_id=u'id_%s',
                                                                              prefix=None,
                                                        initial=None,
                                                                        error class=<class
                                                        'django.forms.util.ErrorList'>,
                                                        label suffix=u':',
                                                        empty permitted=False)
    Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
    Dummy form (for main placeholder).
    base_fields = {'show_title': <django.forms.fields.BooleanField object at 0x4194cd0>, 'generate_lipsum': <django.form
    media
```

plugin_data_fields = [('show_title', False), ('generate_lipsum', False), ('lipsum_language', ''), ('lipsum_max_chars

```
save_plugin_data()
                       We want to save the generated lorem ipsum text for later use. Thus, although we don't show it to the user,
                       in case when generate_lipsum field is set to True, we silently generate the text and save it into the
                       plugin data.
class dash.contrib.plugins.dummy.forms.DummyShortcutsForm(data=None,
                                                                                                                                                                                                  files=None,
                                                                                                                                                                   auto id=u'id %s',
                                                                                                                                                                   fix=None.
                                                                                                                                                                                            initial=None,
                                                                                                                                                                   error_class=<class
                                                                                                                                                                    'django.forms.util.ErrorList'>,
                                                                                                                                                                   label_suffix=u':',
                                                                                                                                                                   empty_permitted=False)
            Bases: dash.contrib.plugins.dummy.forms.DummyForm
            Dummy form for shortucts placeholder.
            base_fields = {'show_title': <django.forms.fields.BooleanField object at 0x4194cd0>, 'generate_lipsum': <django.forms.fields.BooleanField object at 0x4194cd0>, 'generate_l
            media
Module contents
dash.contrib.plugins.memo package
Submodules
dash.contrib.plugins.memo.dash_plugins module
class dash.contrib.plugins.memo.dash_plugins.MemoPlugin(layout_uid,
                                                                                                                                                             holder_uid, workspace=None,
                                                                                                                                                             user=None, position=None)
            Bases: dash.base.BaseDashboardPlugin
            Memo dashboard plugin.
            form
                       alias of MemoForm
            group = <django.utils.functional.__proxy__ object at 0x34d46d0>
            name = <django.utils.functional.__proxy__ object at 0x34d4990>
            uid = 'memo'
class dash.contrib.plugins.memo.dash_plugins.BigMemoPlugin (layout_uid,
                                                                                                                                                                                                             place-
                                                                                                                                                                      holder uid,
                                                                                                                                                                      workspace=None,
                                                                                                                                                                      user=None,
                                                                                                                                                                                                               posi-
                                                                                                                                                                      tion=None)
            Bases: dash.contrib.plugins.memo.dash_plugins.MemoPlugin
            Exact copy of the memo plugin, just rendered bigger.
            group = <django.utils.functional.__proxy__ object at 0x29db290>
            name = <django.utils.functional.__proxy__ object at 0x34d4650>
            uid = 'big_memo'
```

```
class dash.contrib.pluqins.memo.dash_pluqins.HugeMemoPluqin(layout_uid,
                                                                                      place-
                                                                       holder uid,
                                                                       workspace=None,
                                                                       user=None,
                                                                                       posi-
                                                                       tion=None)
     Bases: dash.contrib.plugins.memo.dash_plugins.MemoPlugin
     Exact copy of the memo plugin, just rendered bigger.
     group = <django.utils.functional.__proxy__ object at 0x2927490>
     name = <django.utils.functional.__proxy__ object at 0x29db050>
     uid = 'huge_memo'
class dash.contrib.plugins.memo.dash_plugins.TinyMCEMemoPlugin(layout_uid, place-
                                                                           holder_uid,
                                                                           workspace=None,
                                                                           user=None, posi-
                                                                           tion=None)
     Bases: dash.base.BaseDashboardPlugin
     Memo dashboard plugin.
     form
         alias of TinyMCEMemoForm
     group = <django.utils.functional.__proxy__ object at 0x29272d0>
     help_text = <django.utils.functional.__proxy__ object at 0x2927d90>
     name = <django.utils.functional.__proxy__ object at 0x2927390>
     uid = 'tinymce_memo'
class dash.contrib.plugins.memo.dash_plugins.BigTinyMCEMemoPlugin (layout_uid,
                                                                              place-
                                                                               holder_uid,
                                                                               workspace=None,
                                                                               user=None,
                                                                              posi-
                                                                              tion=None)
     Bases: dash.contrib.plugins.memo.dash_plugins.TinyMCEMemoPlugin
     Exact copy of the memo plugin, just rendered bigger.
     group = <django.utils.functional.__proxy__ object at 0x2927310>
     name = <django.utils.functional.__proxy__ object at 0x2927f10>
     uid = 'big_tinymce_memo'
dash.contrib.plugins.memo.dash_widgets module
class dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget (plugin)
     Bases: dash.base.BaseDashboardPluginWidget
     Memo plugin widget for Android layout (placeholder main).
     cols = 2
     layout_uid = 'android'
     placeholder_uid = 'main'
     plugin_uid = 'memo'
```

```
render (request=None)
    rows = 2
class dash.contrib.plugins.memo.dash_widgets.MemoAndroidShortcutWidget(plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget
    Memo plugin widget for Android layout (placeholder shortcuts).
    cols = 1
    placeholder_uid = 'shortcuts'
    render (request=None)
    rows = 1
class dash.contrib.plugins.memo.dash_widgets.BigMemoAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget
    Big memo plugin widget for Android layout (placeholder main).
    cols = 3
    plugin_uid = 'big_memo'
    rows = 3
class dash.contrib.plugins.memo.dash_widgets.BigMemoWindows8MainWidget(plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget
    Big memo plugin widget for Windows 8 layout (placeholder main).
    cols = 3
    layout_uid = 'windows8'
    plugin_uid = 'big_memo'
    rows = 3
class dash.contrib.plugins.memo.dash_widgets.HugeMemoAndroidMainWidget(plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget
    Huge memo plugin widget for Android layout (placeholder main).
    cols = 4
    plugin_uid = 'huge_memo'
    rows = 5
class dash.contrib.pluqins.memo.dash widgets.TinyMCEMemoAndroidMainWidget (plugin)
    Bases: dash.base.BaseDashboardPluginWidget
    TinyMCE memo plugin widget for Android layout (placeholder main).
    cols = 2
    layout_uid = 'android'
    placeholder_uid = 'main'
    plugin_uid = 'tinymce_memo'
    render (request=None)
    rows = 2
```

```
class dash.contrib.plugins.memo.dash_widgets.BigTinyMCEMemoAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.TinyMCEMemoAndroidMainWidget
    Big memo plugin widget for Android layout (placeholder main).
    cols = 3
    plugin uid = 'big tinymce memo'
    rows = 3
class dash.contrib.plugins.memo.dash_widgets.MemoWindows8MainWidget (plugin)
    Bases: dash.base.BaseDashboardPluginWidget
    Memo plugin widget for Windows 8 layout (placeholder main).
    cols = 2
    layout_uid = 'windows8'
    placeholder_uid = 'main'
    plugin_uid = 'memo'
    render (request=None)
    rows = 2
class dash.contrib.plugins.memo.dash_widgets.MemoWindows8SidebarWidget(plugin)
    Bases: dash.contrib.pluqins.memo.dash widgets.MemoWindows8MainWidget
    Memo plugin widget for Windows8 layout (placeholder sidebar).
    cols = 1
    placeholder_uid = 'sidebar'
    render (request=None)
    rows = 1
class dash.contrib.plugins.memo.dash_widgets.BigMemoWindows8MainWidget(plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.MemoAndroidMainWidget
    Big memo plugin widget for Windows 8 layout (placeholder main).
    cols = 3
    layout_uid = 'windows8'
    plugin_uid = 'big_memo'
    rows = 3
class dash.contrib.plugins.memo.dash widgets.BigMemoWindows8SidebarWidget (plugin)
    Bases: dash.contrib.plugins.memo.dash_widgets.BigMemoWindows8MainWidget
    Big memo plugin widget for Windows 8 layout (placeholder sidebar).
    cols = 2
    layout_uid = 'windows8'
    placeholder_uid = 'sidebar'
    plugin_uid = 'big_memo'
    rows = 2
```

```
dash.contrib.plugins.memo.forms module
class dash.contrib.plugins.memo.forms.MemoForm (data=None,
                                                                                                                                                                                                                                                                                                                 files=None,
                                                                                                                                                                                                             auto id=u'id %s',
                                                                                                                                                                                                                                                                                                           prefix=None,
                                                                                                                                                                                                             initial=None,
                                                                                                                                                                                                                                                                                       error_class=<class
                                                                                                                                                                                                               'django.forms.util.ErrorList'>,
                                                                                                                                                                                                             bel suffix=u':', empty permitted=False)
                   Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
                   Memo form (for Memo plugin).
                   base_fields = {'title': <django.forms.fields.CharField object at 0x34d48d0>, 'text': <django.forms.fields.CharField object at 0x34d0>, 'text': <django.form
                   media
                   plugin_data_fields = [('title', ''), ('text', '')]
class dash.contrib.plugins.memo.forms.TinyMCEMemoForm(data=None,
                                                                                                                                                                                                                                                                                                                files=None,
                                                                                                                                                                                                                                              auto id=u'id %s',
                                                                                                                                                                                                                                                                                                                                       pre-
                                                                                                                                                                                                                                             fix=None,
                                                                                                                                                                                                                                                                                                          initial=None,
                                                                                                                                                                                                                                              error_class=<class
                                                                                                                                                                                                                                               'django.forms.util.ErrorList'>,
                                                                                                                                                                                                                                              label_suffix=u':',
                                                                                                                                                                                                                                              empty permitted=False)
                   Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
                   TinyMCE memo form (for TinyMCEMemo plugin).
                   base_fields = {'title': <django.forms.fields.CharField object at 0x34d44d0>, 'text': <django.forms.fields.CharField object at 0x34d4d0>, 'text': <django.forms.fields
                   media
                   plugin_data_fields = [('title', ''), ('text', '')]
Module contents
dash.contrib.plugins.news package
Subpackages
dash.contrib.plugins.news.management package
Subpackages
dash.contrib.plugins.news.management.commands package
Submodules
dash.contrib.plugins.news.management.commands.news_create_test_data module
class dash.contrib.plugins.news.management.commands.news create test data.Command
                   Bases: django.core.management.base.BaseCommand
                   Populating dummy news items.
                   handle (*args, **options)
```

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```
dash.contrib.plugins.news.management.commands.news_create_test_data.build_image_factory()
     Downloads the https://github.com/barseghyanartur/delusionalinsanity.images/archive/latest.zip locally, unpacks
     it to grab the images. Then makes a list of all the images.
         Return list List of relative paths to images.
dash.contrib.plugins.news.management.commands.news_create_test_data.change_date()
dash.contrib.plugins.news.management.commands.news_create_test_data.fix_image(image)
     Fixes the image path.
         Parameters image (str) – Image path.
         Return str Fixed image path.
dash.contrib.plugins.news.management.commands.news_create_test_data.split_sentences(f)
dash.contrib.plugins.news.management.commands.news\_create\_test\_data.split\_words(f)
Module contents
Module contents
Submodules
dash.contrib.plugins.news.admin module
class dash.contrib.plugins.news.admin.NewsItemAdmin (model, admin_site)
     Bases: slim.admin.SlimAdmin
     Foo item admin.
     class Meta
         app_label = <django.utils.functional.__proxy__ object at 0x4332d50>
     NewsItemAdmin.collapse_slim_fieldset = False
     NewsItemAdmin.fieldsets = ((None, {'fields': ('title', 'slug', 'body', 'image')}), (<django.utils.functional.__proxy_
     NewsItemAdmin.list_display = ('title', 'admin_image_preview', 'date_published')
     NewsItemAdmin.media
     NewsItemAdmin.ordering = ('-date_published',)
     NewsItemAdmin.prepopulated_fields = {'slug': ('title',)}
     NewsItemAdmin.readonly_fields = ('date_created', 'date_updated')
dash.contrib.plugins.news.constants module
dash.contrib.plugins.news.dash_plugins module
class dash.contrib.plugins.news.dash_plugins.NewsPlugin(layout_uid,
                                                                                    place-
                                                                 holder_uid, workspace=None,
                                                                 user=None, position=None)
     Bases: dash.base.BaseDashboardPlugin
     News plugin.
```

```
form
         alias of NewsForm
     group = <django.utils.functional.__proxy__ object at 0x434c7d0>
     name = <django.utils.functional.__proxy__ object at 0x434c790>
     post processor()
         Getting news items for the current active language.
     uid = 'news'
class dash.contrib.plugins.news.dash_plugins.HugeNewsPlugin (layout_uid,
                                                                                       place-
                                                                       holder uid,
                                                                       workspace=None,
                                                                       user=None,
                                                                                        posi-
                                                                       tion=None)
     Bases: dash.base.BaseDashboardPlugin
     News plugin.
     form
         alias of NewsForm
     group = <django.utils.functional.__proxy__ object at 0x434c910>
     name = <django.utils.functional.__proxy__ object at 0x434c890>
     uid = 'huge_news'
dash.contrib.plugins.news.dash_widgets module
class dash.contrib.plugins.news.dash_widgets.NewsAndroidMainWidget (plugin)
     Bases: dash.base.BaseDashboardPluginWidget
     News plugin widget for Android layout (placeholder main).
     cols = 2
     layout_uid = 'android'
     media_css = ['css/dash_plugin_news.css']
     media_js = ['js/dash_plugin_news.js']
     placeholder_uid = 'main'
     plugin_uid = 'news'
     render (request=None)
     rows = 5
class dash.contrib.plugins.news.dash_widgets.HugeNewsAndroidMainWidget(plugin)
     Bases: dash.contrib.plugins.news.dash widgets.NewsAndroidMainWidget
     Huge news plugin widget for Android layout (placeholder main).
     cols = 4
     media_css = ['css/dash_plugin_news.css']
     media_js = ['js/dash_plugin_huge_news.js']
     plugin_uid = 'huge_news'
     render (request=None)
     rows = 5
```

dash.contrib.plugins.news.defaults module

```
dash.contrib.plugins.news.forms module
class dash.contrib.plugins.news.forms.NewsForm (data=None,
                                                                                 files=None,
                                                      auto id=u'id %s',
                                                                                prefix=None,
                                                      initial=None,
                                                                          error_class=<class
                                                       'django.forms.util.ErrorList'>,
                                                      bel_suffix=u':', empty_permitted=False)
     Bases: django.forms.forms.form, dash.base.DashboardPluginFormBase
     Form for main NewsPlugin.
     base fields = {'show title': <django.forms.fields.BooleanField object at 0x434c250>, 'max items': <django.forms.field
     media
     plugin_data_fields = [('show_title', True), ('max_items', 6), ('truncate_after', 35), ('cache_for', 3600)]
dash.contrib.plugins.news.models module
class dash.contrib.pluqins.news.models.NewsItem(*args, **kwargs)
     Bases: django.db.models.base.Model, slim.models.Slim
     News item.
     title Title of the news item. body Teaser of the news item. WYSIWYG. image Headline image of the news
     item. date_published Date item is published. On creating defaults to datetime.datetime.now.
     language Language.
     exception DoesNotExist
         Bases: django.core.exceptions.ObjectDoesNotExist
     exception NewsItem.MultipleObjectsReturned
         Bases: django.core.exceptions.MultipleObjectsReturned
     NewsItem.admin_image_preview()
         Preview of the image. For admin use mainly.
             Return str
     NewsItem.get_absolute_url (*moreargs, **morekwargs)
     NewsItem.get_language_display(*moreargs, **morekwargs)
     NewsItem.objects = <django.db.models.manager.Manager object at 0x4332cd0>
     NewsItem.translation of
     NewsItem.translations
dash.contrib.plugins.news.urls module
```

dash.contrib.plugins.news.views module

dash.contrib.plugins.news.views.browse(*args, **kwargs) In the template, we show all available NewsItems for current language.

Parameters

- **request** (*django.http.HttpRequest*) –
- template_name (str) -

Return django.http.HttpResponse

```
dash.contrib.plugins.news.views.detail(request, slug, template_name='news/detail.html',
                                                template name ajax='news/detail ajax.html')
```

News item detail. In the template, we show the title and the body of the News item and links to all its' all available translations.

Parameters

- request (django.http.HttpRequest) –
- **slug** (*str*) Foo item slug.
- template_name (str) -

Return django.http.HttpResponse

Module contents

dash.contrib.plugins.rss_feed package

Subpackages

dash.contrib.plugins.rss_feed.templatetags package

Submodules

dash.contrib.plugins.rss_feed.templatetags.rss_feed_tags module

```
dash.contrib.plugins.rss_feed.templatetags.rss_feed_tags.convert_to_datetime(value)
```

Module contents

Submodules

dash.contrib.plugins.rss_feed.dash_plugins module

```
class dash.contrib.pluqins.rss feed.dash pluqins.ReadRSSFeedPluqin(layout uid,
                                                                             place-
                                                                             holder uid,
                                                                             workspace=None,
                                                                             user=None,
                                                                             posi-
                                                                             tion=None)
```

Bases: dash.base.BaseDashboardPlugin

Read RSS feed into HTML plugin.

form

alias of ReadRSSFeedForm

```
group = <django.utils.functional.__proxy__ object at 0x38e58d0>
name = <django.utils.functional.__proxy__ object at 0x38e5c50>
uid = 'read_rss_feed'
```

```
class dash.contrib.plugins.rss_feed.dash_plugins.BigReadRSSFeedPlugin(layout_uid,
                                                                                 place-
                                                                                 holder uid,
                                                                                 workspace=None,
                                                                                 user=None,
                                                                                 posi-
                                                                                 tion=None)
    Bases: dash.contrib.plugins.rss_feed.dash_plugins.ReadRSSFeedPlugin
    Big read RSS feed into HTML plugin.
    name = <django.utils.functional. proxy object at 0x38e5310>
    uid = 'big_read_rss_feed'
dash.contrib.plugins.rss_feed.dash_widgets module
class dash.contrib.plugins.rss_feed.dash_widgets.ReadRSSFeedAndroidMainWidget (plugin)
    Bases: dash.base.BaseDashboardPluginWidget
    Read RSS feed plugin widget for Android layout (placeholder main).
    cols = 2
    layout_uid = 'android'
    media_css = ['css/dash_plugin_read_rss_feed.css']
    media js = ['js/dash plugin read rss feed.js']
    placeholder_uid = 'main'
    plugin_uid = 'read_rss_feed'
    render (request=None)
    rows = 3
class dash.contrib.plugins.rss_feed.dash_widgets.ReadRSSFeedWindows8MainWidget (plugin)
    Bases: dash.contrib.plugins.rss_feed.dash_widgets.ReadRSSFeedAndroidMainWidget
    Read RSS feed plugin widget for Windows8 (placeholder main).
    layout_uid = 'windows8'
class dash.contrib.plugins.rss_feed.dash_widgets.BigReadRSSFeedAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.rss_feed.dash_widgets.ReadRSSFeedAndroidMainWidget
    Big read RSS feed plugin widget for Android layout (placeholder main).
    cols = 3
    plugin_uid = 'big_read_rss_feed'
    rows = 3
dash.contrib.plugins.rss_feed.defaults module
dash.contrib.plugins.rss_feed.forms module
```

```
class dash.contrib.plugins.rss_feed.forms.ReadRSSFeedForm(data=None,
                                                                                   files=None,
                                                                      auto_id=u'id_%s',
                                                                      fix=None, initial=None,
                                                                      error_class=<class
                                                                      'django.forms.util.ErrorList'>,
                                                                      label_suffix=u':',
                                                                      empty permitted=False)
     Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
     Form for main ReadRSSFeedPlugin.
     base_fields = {'feed_url': <django.forms.fields.URLField object at 0x43fd750>, 'custom_feed_title': <django.forms.fi
     media
     plugin_data_fields = [('feed_url', ''), ('custom_feed_title', ''), ('show_feed_title', True), ('max_items', 6), ('truncato
dash.contrib.plugins.rss_feed.helpers module
dash.contrib.plugins.rss_feed.helpers.max_num_template(max_items, default)
dash.contrib.plugins.rss_feed.urls module
dash.contrib.plugins.rss_feed.views module
dash.contrib.plugins.rss_feed.views.get_feed(*args, **kwargs)
          Parameters request (django.http.HttpRequest) –
```

Module contents

dash.contrib.plugins.url package

Submodules

dash.contrib.plugins.url.conf module

```
\verb|dash.contrib.plugins.url.conf.get_setting| (\textit{setting}, \textit{override=None})
```

Get a setting from dash.contrib.plugins.url conf module, falling back to the default.

If override is not None, it will be used instead of the setting.

Return django.http.HttpResponse

Parameters

- **setting** String with setting name
- override Value to use when no setting is available. Defaults to None.

Returns Setting value.

```
dash.contrib.plugins.url.dash plugins module
class dash.contrib.plugins.url.dash_plugins.URLPlugin (layout_uid,
                                                                            placeholder uid,
                                                               workspace=None,
                                                                                 user=None,
                                                               position=None)
     Bases: dash.base.BaseDashboardPlugin
     URL dashboard plugin.
     form
         alias of URLForm
     group = <django.utils.functional.__proxy__ object at 0x44c7850>
     html class
         If plugin has an image, we add a class iconic to it.
     name = <django.utils.functional. proxy object at 0x44c7610>
     uid = 'url'
dash.contrib.plugins.url.dash widgets module
class dash.contrib.plugins.url.dash_widgets.URLAndroidMainWidget (plugin)
     Bases: dash.base.BaseDashboardPluginWidget
     URL plugin widget for Android layout (placeholder main).
     cols = 1
     layout_uid = 'android'
     media_css = ('css/dash_plugin_url_android.css',)
     placeholder_uid = 'main'
     plugin uid = 'url'
     render (request=None)
     rows = 1
class dash.contrib.pluqins.url.dash_widgets.URLAndroidShortcutWidget(plugin)
     Bases: dash.contrib.plugins.url.dash_widgets.URLAndroidMainWidget
     URL plugin widget for Android layout (placeholder shortcuts).
     cols = 1
     placeholder_uid = 'shortcuts'
     render (request=None)
     rows = 1
class dash.contrib.plugins.url.dash_widgets.URLWindows8MainWidget (plugin)
     Bases: dash.base.BaseDashboardPluginWidget
     URL plugin widget for Windows 8 layout (placeholder main).
     cols = 1
     layout_uid = 'windows8'
     media_css = ('css/dash_plugin_url_windows8.css',)
     placeholder_uid = 'main'
     plugin_uid = 'url'
```

```
render (request=None)
     rows = 1
class dash.contrib.plugins.url.dash_widgets.URLWindows8SidebarWidget(plugin)
     Bases: dash.contrib.plugins.url.dash_widgets.URLWindows8MainWidget
     URL plugin widget for Windows 8 layout (placeholder sidebar).
     placeholder_uid = 'sidebar'
dash.contrib.plugins.url.defaults module
dash.contrib.plugins.url.forms module
class dash.contrib.plugins.url.forms.URLForm(*args, **kwargs)
     Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
     URL form for URLPlugin plugin.
     class Media
          css = {'all': ('css/dash_plugin_url_form.css',)}
          js = ('js/dash_plugin_url_form.js',)
     URLForm.base_fields = {'title': <django.forms.fields.CharField object at 0x438fd90>, 'url': <django.forms.fields.UR
     URLForm.media
     URLForm.plugin_data_fields = [('title', ''), ('url', ''), ('external', False), ('image', '')]
dash.contrib.plugins.url.settings module
Module contents
dash.contrib.plugins.video package
Submodules
dash.contrib.plugins.video.dash_plugins module
class dash.contrib.plugins.video.dash_plugins.VideoPlugin(layout_uid,
                                                                                        place-
                                                                      holder_uid,
                                                                      workspace=None,
                                                                      user=None,
                                                                                         posi-
                                                                      tion=None)
     Bases: dash.base.BaseDashboardPlugin
     Video dashboard plugin.
     form
          alias of VideoForm
     group = <django.utils.functional.__proxy__ object at 0x40e9b10>
     html class
          If plugin has an image, we add a class iconic to it.
```

```
name = <django.utils.functional.__proxy__ object at 0x44b2e50>
     post_processor()
     uid = 'video'
class dash.contrib.plugins.video.dash_plugins.BigVideoPlugin(layout_uid,
                                                                                     place-
                                                                        holder uid,
                                                                        workspace=None,
                                                                        user=None,
                                                                                      posi-
                                                                        tion=None)
     Bases: dash.contrib.plugins.video.dash_plugins.VideoPlugin
     Video dashboard plugin.
     name = <django.utils.functional.__proxy__ object at 0x40e9c50>
     uid = 'big_video'
class dash.contrib.plugins.video.dash_plugins.HugeVideoPlugin(layout_uid,
                                                                         placeholder uid,
                                                                         workspace=None,
                                                                         user=None,
                                                                                      posi-
                                                                         tion=None)
     Bases: dash.contrib.plugins.video.dash plugins.VideoPlugin
     Video dashboard plugin.
     name = <django.utils.functional.__proxy__ object at 0x40e9a50>
     uid = 'huge video'
class dash.contrib.plugins.video.dash_plugins.GiganticVideoPlugin(layout_uid,
                                                                              place-
                                                                              holder_uid,
                                                                              workspace=None,
                                                                              user=None,
                                                                              posi-
                                                                              tion=None)
     Bases: dash.contrib.plugins.video.dash_plugins.VideoPlugin
     Video dashboard plugin.
     name = <django.utils.functional.__proxy__ object at 0x40e95d0>
     uid = 'gigantic_video'
dash.contrib.plugins.video.dash widgets module
class dash.contrib.plugins.video.dash_widgets.VideoAndroidMainWidget(plugin)
     Bases: dash.base.BaseDashboardPluginWidget
     Video plugin widget for Android layout (placeholder main).
     cols = 2
     layout_uid = 'android'
     media_css = ('css/dash_plugin_video.css',)
     placeholder_uid = 'main'
     plugin_uid = 'video'
     render (request=None)
     rows = 2
```

```
class dash.contrib.plugins.video.dash_widgets.BigVideoAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.video.dash widgets.VideoAndroidMainWidget
    Big video plugin widget for Android layout (placeholder main).
    cols = 3
    plugin uid = 'big video'
    rows = 3
class dash.contrib.plugins.video.dash_widgets.HugeVideoAndroidMainWidget(plugin)
    Bases: dash.contrib.plugins.video.dash_widgets.VideoAndroidMainWidget
    Huge video plugin widget for Android layout (placeholder main).
    cols = 4
    plugin_uid = 'huge_video'
    rows = 4
class dash.contrib.plugins.video.dash_widgets.GiganticVideoAndroidMainWidget (plugin)
    Bases: dash.contrib.plugins.video.dash_widgets.VideoAndroidMainWidget
    Gigantic video plugin widget for Android layout (placeholder main).
    cols = 5
    plugin uid = 'gigantic video'
    rows = 5
class dash.contrib.plugins.video.dash_widgets.VideoWindows8MainWidget (plugin)
    Bases: dash.base.BaseDashboardPluginWidget
    Video plugin widget for Windows 8 layout (placeholder main).
    cols = 2
    layout_uid = 'windows8'
    media_css = ('css/dash_plugin_video.css',)
    placeholder_uid = 'main'
    plugin_uid = 'video'
    render (request=None)
    rows = 2
class dash.contrib.pluqins.video.dash widgets.VideoWindows8SidebarWidget(plugin)
    Bases: dash.contrib.plugins.video.dash_widgets.VideoWindows8MainWidget
    Video plugin widget for Windows 8 layout (placeholder sidebar).
    placeholder_uid = 'sidebar'
```

dash.contrib.plugins.video.forms module

```
class dash.contrib.plugins.video.forms.VideoForm (data=None,
                                                                                      files=None,
                                                             auto id=u'id %s',
                                                                                     prefix=None,
                                                             initial=None,
                                                                               error class=<class
                                                             'django.forms.util.ErrorList'>,
                                                             label_suffix=u':',
                                                             empty permitted=False)
     Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
     Video form for VideoPlugin plugin.
     base_fields = {'title': <django.forms.fields.CharField object at 0x44b2190>, 'url': <django.forms.fields.URLField obj
     media
     plugin_data_fields = [('title', ''), ('url', '')]
Module contents
dash.contrib.plugins.weather package
Submodules
dash.contrib.plugins.weather.conf module
dash.contrib.plugins.weather.conf.get_setting(setting, override=None)
     Get a setting from dash.contrib.plugins.weather conf module, falling back to the default.
     If override is not None, it will be used instead of the setting.
          Parameters
                • setting – String with setting name
```

• **override** – Value to use when no setting is available. Defaults to None.

Returns Setting value.

dash.contrib.plugins.weather.dash_plugins module

```
class dash.contrib.plugins.weather.dash_plugins.WeatherPlugin(layout_uid,
                                                                           placeholder_uid,
                                                                           workspace=None,
                                                                           user=None,
                                                                                         posi-
                                                                           tion=None)
     Bases: dash.base.BaseDashboardPlugin
     Weather dashboard plugin.
     form
         alias of WeatherForm
     group = <django.utils.functional.__proxy__ object at 0x2d39e50>
     name = <django.utils.functional.__proxy__ object at 0x2d39d10>
     post_processor()
         If no text available, use dummy.
     uid = 'weather'
```

```
Bases: dash.base.BaseDashboardPluginWidget
     Weather plugin widget for Android layout (placeholder main).
     cols = 2
     layout_uid = 'android'
     media_css = ['css/dash_plugin_weather.css']
     placeholder_uid = 'main'
     plugin_uid = 'weather'
     render (request=None)
     rows = 2
class dash.contrib.plugins.weather.dash_widgets.BigWeatherAndroidMainWidget (plugin)
     Bases: dash.contrib.plugins.weather.dash_widgets.WeatherAndroidMainWidget
     Big memo plugin widget for Android layout (placeholder main).
     cols = 3
     plugin_uid = 'big_weather'
     rows = 3
dash.contrib.plugins.weather.defaults module
dash.contrib.plugins.weather.forms module
class dash.contrib.plugins.weather.forms.WeatherForm(*args, **kwargs)
     Bases: django.forms.forms.Form, dash.base.DashboardPluginFormBase
     Form for main WeatherPlugin.
     base_fields = {'custom_title': <django.forms.fields.CharField object at 0x40eb810>, 'show_feed_title': <django.forms
     media
     plugin_data_fields = [('custom_title', ''), ('show_title', True), ('cache_for', 3600), ('public_ip', ''), ('weather_data_
     save_plugin_data()
         For showing the weather, we need an IP address. Although we don't make it possible for the user to specify
```

class dash.contrib.plugins.weather.dash_widgets.WeatherAndroidMainWidget (plugin)

dash.contrib.plugins.weather.settings module

it manually, we silently obtain it and save into the plugin data.

dash.contrib.plugins.weather.dash widgets module

Module contents

Module contents

Module contents

dash.management package

Subpackages

dash.management.commands package

Submodules

dash.management.commands.dash_find_broken_dashboard_entries module

handle (*args, **options)

Adds the missing plugins to database (dash.models.DashboardPlugin). This command shall be ran every time a developer adds a new plugin.

dash.management.commands.dash_sync_plugins module

class dash.management.commands.dash_sync_plugins.Command

Bases: django.core.management.base.BaseCommand

handle (*args, **options)

Adds the missing plugins to database (dash.models.DashboardPlugin). This command shall be ran every time a developer adds a new plugin.

dash.management.commands.dash_update_plugin_data module

class dash.management.commands.dash_update_plugin_data.Command
 Bases: django.core.management.base.BaseCommand

handle (*args, **options)

Updates the plugin data for all dashboard entries of all users. Rules for update are specified in the plugin itself.

This command shall be ran if significant changes have been made to the system for which the data shall be updated.

Module contents

Module contents

dash.templatetags package

Submodules

dash.templatetags.dash tags module

```
dash.templatetags.dash tags.get dash plugin(parser, token)
```

Gets the plugin. Note, that dashboard_entry shall be a instance of dash.models.DashboardEntry.

Syntax {% get_dash_plugin dashboard_entry as [context_var_name] %}

```
Example {% get_dash_plugin dashboard_entry as plugin %}
             {% get_dash_plugin dashboard_entry as plugin %} {{ plugin.render }}
Module contents
18.1.2 Submodules
18.1.3 dash.admin module
class dash.admin.DashboardEntryAdmin (model, admin_site)
     Bases: django.contrib.admin.options.ModelAdmin
     Dashboard entry admin.
     class Meta
         app_label = <django.utils.functional.__proxy__ object at 0x249bb10>
     DashboardEntryAdmin.fieldsets = ((None, {'fields': ('plugin_uid', 'plugin_data', 'layout_uid', 'placeholder_uid',
     DashboardEntryAdmin.list_display = ('plugin_uid', 'plugin_uid_code', 'plugin_data', 'layout_uid', 'placeholden
     DashboardEntryAdmin.list_editable = ('position',)
     DashboardEntryAdmin.list_filter = ('user', 'workspace', 'layout_uid', 'placeholder_uid', 'plugin_uid')
     DashboardEntryAdmin.media
     DashboardEntryAdmin.queryset (request)
     DashboardEntryAdmin.readonly_fields = ('plugin_uid_code',)
class dash.admin.DashboardPluginAdmin (model, admin_site)
     Bases: django.contrib.admin.options.ModelAdmin
     Dashboard plugin admin.
     class Meta
         app_label = <django.utils.functional.__proxy__ object at 0x249bbd0>
     DashboardPluginAdmin.fieldsets = ((None, {'fields': ('plugin_uid', 'users', 'groups')}),)
     DashboardPluginAdmin.filter_horizontal = ('users', 'groups')
     DashboardPluginAdmin.list_display = ('plugin_uid_admin', 'users_list', 'groups_list')
     DashboardPluginAdmin.media
     DashboardPluginAdmin.queryset (request)
     DashboardPluginAdmin.readonly_fields = ('plugin_uid', 'plugin_uid_admin')
class dash.admin.DashboardSettingsAdmin (model, admin_site)
     Bases: django.contrib.admin.options.ModelAdmin
     Dashboard plugin admin.
     class Meta
```

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app_label = <django.utils.functional.__proxy__ object at 0x249bd50>

```
DashboardSettingsAdmin.fieldsets = ((None, {'fields': ('title', 'user', 'layout_uid', 'is_public')}),)
     DashboardSettingsAdmin.list_display = ('title', 'user', 'layout_uid', 'is_public')
     DashboardSettingsAdmin.media
     DashboardSettingsAdmin.queryset (request)
class dash.admin.DashboardWorkspaceAdmin (model, admin site)
     Bases: django.contrib.admin.options.ModelAdmin
     Dashboard workspace admin.
     class Meta
         app_label = <django.utils.functional.__proxy__ object at 0x249b8d0>
     DashboardWorkspaceAdmin.fieldsets = ((None, {'fields': ('name', 'position', 'is_public')}), (<django.utils.function)
     DashboardWorkspaceAdmin.list_display = ('name', 'slug', 'layout_uid', 'position', 'user', 'is_public')
     DashboardWorkspaceAdmin.list_editable = ('position',)
     DashboardWorkspaceAdmin.list_filter = ('layout_uid', 'is_public')
     DashboardWorkspaceAdmin.media
     DashboardWorkspaceAdmin.readonly_fields = ('slug',)
18.1.4 dash.base module
All uids are supposed to be pythonic function names (see PEP http://www.python.org/dev/peps/pep-0008/#function-
names).
class dash.base.BaseDashboardLayout (user=None)
     Bases: object
     Base layout.
     Layouts consist of placeholders.
```

Properties

- *uid* (str): Layout unique identifier (globally).
- name (str): Layout name.
- description (str): Layout description.
- placeholders (iterable): Iterable (list, tuple or set) of dash.base.BaseDashboardPlaceholder subclasses.
- *view_template_name* (str): Temlate name used to render the layout (view).
- edit_template_name (str): Template named used to render the layout (edit).
- html_classes (str): Extra HTML class that layout should get.
- *cell_units* (str):
- media_css (list): List all specific stylesheets.
- media_js (list): List all specific javascripts.

cell_units = None

```
collect_widget_media (dashboard_entries)
     Collects the widget media files.
         Parameters dashboard_entries (iterable) - Iterable of dash.models.DashboardEntry
             instances.
         Return list
description = None
edit_template_name = None
edit_template_name_ajax = None
get_css(placeholders)
    Gets placeholder specific css.
         Parameters placeholders (iterable) - Iterable of dash.base.BaseDashboardPlaceholder sub-
            classed instances.
         Return str
get_edit_template_name (request=None)
get_grouped_dashboard_entries (dashboard_entries)
     Gets dashboard entries grouped by placeholder.
         Parameters dashboard_entries (iterable) – Iterable of dash.models.DashboardEntry objects.
         Return list
get media css()
     Gets all CSS media files (for the layout + plugins).
         Return list
get media is()
     Gets all JavaScript media files (for the layout + plugins).
         Return list
get_placeholder (uid, default=None)
get_placeholder_instances (dashboard_entries=None, workspace=None, request=None)
     Gets placeholder instances.
         Parameters
             • dashboard_entries (iterable) – Iterable of dash.models.DashboardEntry objects.
             • request (django.http.HttpRequest) –
         Return list List of dash.base.BaseDashboardPlaceholder subclassed instances.
get_placeholder_uids (request=None)
     Gets the list of placeholder uids.
         Parameters request (django.http.HttpRequest) –
         Return list
get_placeholders (request=None)
```

Return itetable List of placeholder classes. Override in your layout if you need a custom be-

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haviour.

Gets the list of placeholders registered for the layout.

Parameters request (django.http.HttpRequest) -

```
get_view_template_name (request=None)
     html class
          Class used in the HTML.
              Return str
     html classes = []
     media_css = []
     media_js = []
     name = None
     placeholders = []
     primary_html_class
     render_for_edit (dashboard_entries=None, workspace=None, request=None)
          Renders the layout.
              Parameters
                  • dashboard_entries (iterable) -
                  • workspace (str) – Current workspace.
                  • request (django.http.HttpRequest) –
              Return str
     render_for_view (dashboard_entries=None, workspace=None, request=None)
          Renders the layout.
              Parameters
                  • dashboard_entries (iterable) -
                  • workspace (str) – Current workspace.
                  • request (django.http.HttpRequest) –
              Return str
     uid = None
     view_template_name = None
     view_template_name_ajax = None
class dash.base.BaseDashboardPlaceholder (layout)
     Bases: object
     Base placeholder.
          Properties
               • uid (str): Unique identifier (shouldn't repeat within a single layout).
     cell_height = None
     cell_units
     cell_width = None
     cols = None
```

css

CSS styles for the placeholders and plugins. The placeholder dimensions as well as columns sizes, should be handled here. Since we are in a placeholder and a placeholder has a defined number of rows and columns and each reneder has just a fixed amount of rows and columns defined, we can render the top left corners generic css classes.

Cells do NOT have margins or paddings. This is essential (since all the plugins are positioned absolutely). If you want to have padding in your plugin widget, specify the *plugin-content-wrapper* class style in your specific layout/theme.

```
Example
            .placeholder .plugin .plugin-content-wrapper { padding: 5px;
        Return str
edit_template_name = ""
get_edit_template_name()
get_view_template_name()
html class
    Class used in the HTML.
        Return str
html_classes = []
html id
    ID used in the HTML. Unique.
        Return str
load_dashboard_entries=None)
    Feed the dashboard entries to the layout for rendering later.
        Parameters dashboard_entries (iterable) - Iterable of dash.models.DashboardEntry objects.
primary_html_class
render for edit()
    Renders the placeholder for edit mode.
        Parameters
            • workspace (str) – Current workspace slug.
            • request (django.http.HttpRequest) –
        Return str
render_for_view()
    Renders the placeholder for view mode.
        Return str
rows = None
uid = None
```

view_template_name = ''

Bases: object

Base dashboard plugin from which every plugin should inherit.

Properties

- uid (str): Plugin uid (obligatory). Example value: 'dummy', 'wysiwyg', 'news'.
- name (str): Plugin name (obligatory). Example value: 'Dummy plugin', 'WYSIWYG', 'Latest news'.
- *description* (str): Plugin decription (optional). Example value: 'Dummy plugin used just for testing'.
- help_text (str): Plugin help text (optional). This text would be shown in dash.views.add_dashboard_entry and dash.views.edit_dashboard_entry views.
- form: Plugin form (optional). A subclass of django.forms.Form. Should be given in case plugin is configurable.
- add_form_template (str) (optional): Add form template (optional). If given, overrides the dash.views.add dashboard entry default template.
- edit_form_template (str): Edit form template (optional). If given, overrides the dash.views.edit_dashboard_entry default template.
- html_classes (list): List of extra HTML classes for the plugin.
- *group* (str): Plugin are grouped under the specified group. Override in your plugin if necessary.

add_form_template = None

delete_plugin_data()

Used in dash.views.delete_dashboard_entry. Fired automatically, when dash.models.DashboardEntry object is about to be deleted. Make use of it if your plugin creates database records that are not monitored externally but by dash only.

description = None

edit_form_template = None

form = None

get_form()

Get the plugin form class. Override this method in your subclassed dash.base.DashboardPlugin class when you need your plugin setup to vary depending on the placeholder, workspace, user or request given. By default returns the value of the form attribute defined in your plugin.

Return django.forms.Formldjango.forms.ModelForm Subclass of django.forms.Form **or** django.forms.ModelForm.

get_initialised_create_form(data=None, files=None)

Used dash.views.add_dashboard_entry view to gets initialised form for object to be created.

get_initialised_create_form_or_404 (data=None, files=None)

Same as get initialised create form but raises diango. http. Http404 on errors.

get_initialised_edit_form (data=None, files=None, auto_id='id_%s', prefix=None, initial=None, error_class=<class 'django.forms.util.ErrorList'>, label_suffix=':', empty_permitted=False, instance=None)
Used in dash.views.edit_dashboard_entry view.

Fed as initial argument to the plugin form when initialising the instance for adding or editing the plugin. Override in your plugin class if you need customisations.

get_position()

Gets the exact position of the plugin widget in the placeholder (row number, col number).

Return tuple Tuple of row and col numbers.

```
get_widget (request=None, as_instance=False)
```

Gets the plugin widget.

Parameters

- **request** (*django.http.HttpRequest*) –
- as instance (bool) –

Return mixed Subclass of *dash.base.BaseDashboardPluginWidget* or instance of subclassed *dash.base.BaseDashboardPluginWidget* object.

```
group = 'General'
help_text = None
html class
```

A massive work on positioning the plugin and having it to be displayed in a given width is done here. We should be getting the plugin widget for the plugin given and based on its' properties (static!) as well as on plugin position (which we have from model), we can show the plugin with the exact class.

```
html_classes = []
```

html_id

load_plugin_data (plugin_data)

Loads the plugin data saved in dash.models.DashboardEntry.Plugin data is saved in JSON string.

Parameters plugin_data (*str*) – JSON string with plugin data.

name = None

post_processor()

Redefine in your subclassed plugin when necessary.

Post process plugin data here (before rendering). This methid is being called after the data has been loaded into the plugin.

Note, that request (django.http.HttpRequest) is available (self.request).

pre_processor()

Redefine in your subclassed plugin when necessary.

Pre process plugin data (before rendering). This method is being called before the data has been loaded into the plugin.

Note, that request (django.http.HttpRequest) is available (self.request).

```
process (plugin_data=None, fetch_related_data=False)
    Init plugin with data.

process_plugin_data (fetch_related_data=False)
    Processes the plugin data.

render (request=None)
    Renders the plugin HTML (for dashboard workspace).

    Parameters request (django.http.HttpRequest) -
    Return str

uid = None

update_plugin_data (dashboard_entry)
    Used in dash.management.commands.dash_update_plugin_data.
```

Some plugins would contain data fetched from various sources (models, remote data). Since dash-board entries are by definition loaded extremely much, you are advised to store as much data as possible in plugin_data field of dash.models.DashboardEntry. Some externally fetched data becomes invalid after some time and needs updating. For that purpose, in case if your plugin needs that, redefine this method in your plugin. If you need your data to be periodically updated, add a cron-job which would run dash_update_plugin_data management command (see dash.management.commands.dash_update_plugin_data module).

```
Parameters dash.models.DashboardEntry – Instance of dash.models.DashboardEntry.
```

class dash.base.BaseDashboardPluginWidget (plugin)

Bases: object

Base plugin widget.

So, if we would want to register a plugin widget (renderer) for some layout, we would first define the plugin widget and then just write:

```
>>> plugin_widget_registry.register(DummyPluginWidget)
```

Plugin widget is always being registered for a placeholder. Placeholder in its' turn has number of rows and columns. Since we register each widget for a (layout, placeholder, plugin) combination separately, it fits the needs and requirements perfectly. In that way we are able to tell, wheither plugin has a widget available and actually valid (qua dimensions) for the placeholder. Plugin is just data. Nothing more. Widget operates with that data. Thus, widget has number of rows and columns it occupies in the placeholder registered. By default, number of rows and columns is set to 1, which means that a plugin occupies just 1 cell. But, certainly, there can be plugins that occupy more space in a placeholder.

```
cols = 1
html_class = ''
html_classes = []
layout_uid = None
media_css = []
media_js = []
placeholder_uid = None
plugin_uid = None
render (request=None)
```

rows = 1

```
dash.base.get_registered_plugins()
```

Gets a list of registered plugins in a form if tuple (plugin name, plugin description). If not yet autodiscovered, autodiscovers them.

Return list

```
dash.base.get_registered_plugin_uids()
```

Gets a list of registered plugin uids as a list. If not yet autodiscovered, autodiscovers them.

Return list

```
dash.base.validate_plugin_uid(plugin_uid)
```

Validates the plugin uid.

Parameters plugin_uid (str) -

Return bool

```
dash.base.get_registered_layouts()
```

Gets registered layouts.

```
dash.base.get_registered_layout_uids()
```

Gets uids of registered layouts.

```
dash.base.get_layout (layout_uid=None, as_instance=False)
```

Gets the layout by layout_uid given. If left empty, takes the default one chosen in settings.

Raises a dash.exceptions.NoActiveLayoutChosen when no default layout could be found.

Return dash.base.BaseDashboardLayout Sublcass of dash.base.BaseDashboardLayout.

```
dash.base.validate_placeholder_uid(layout, placeholder_uid)
```

Validates the placeholder.

Parameters

- layout_uid (str) -
- placeholder_uid (str) -

Return bool

```
dash.base.ensure_autodiscover()
```

Ensures that plugins are autodiscovered.

$class \; \verb|dash.base.DashboardPluginFormBase| \\$

Bases: object

Not a form actually. Defined for magic only.

Property iterable plugin_data_fields Fields to get when calling the get_plugin_data method.

Example

```
>>> plugin_data_fields = (
>>> ('name', ''),
>>> ('active': False)
>>> )
```

get_plugin_data()

Data that would be saved in the plugin_data field of the dash.models.DashboardEntry subclassed model.

```
plugin_data_fields = None
```

```
save_plugin_data()
```

Dummy, but necessary.

```
dash.base.collect_widget_media(dashboard_entries)
```

Collects the widget media for dashboard entries given.

Parameters dashboard_entries (*iterable*) — Iterable of dash.models.DashboardEntry instances.

Return dict Returns a dict containing the 'js' and 'css' keys. Correspondent values of those keys are lists containing paths to the CSS and JS media files.

18.1.5 dash.conf module

```
dash.conf.get_setting(setting, override=None)
```

Get a setting from dash conf module, falling back to the default.

If override is not None, it will be used instead of the setting.

Parameters

- **setting** String with setting name
- **override** Value to use when no setting is available. Defaults to None.

Returns Setting value.

18.1.6 dash.decorators module

Checks for the permissions given based on the strategy chosen.

Parameters

- perms (iterable) -
- satisfy (str) Allowed values are "all" and "any".
- login_url (str) -
- raise_exception (bool) If set to True, the PermissionDenied exception is raised on failures.

Return bool

Example

dash.decorators.all_permissions_required(perms, login_url=None, raise_exception=False)

Example

dash.decorators.any_permission_required(perms, login_url=None, raise_exception=False)

Example

dash.decorators.edit_dashboard_permission_required(login_url=None,

 $raise_exception = False)$

Checks if user has permissions to edit dashboard. Simply, check is successfull if any of the following permission checks are satisfied:

- ·Can add dashboard entry
- •Can change dashboard entry
- Can delete dashboard entry
- •Can add dashboard workspace
- •Can change dashboard workspace
- •Can delete dashboard workspace
- Can add dashboard settings
- •Can change dashboard settings
- •Can delete dashboard settings

Example

```
>>> @login_required
>>> @edit_dashboard_permission_required() # Do not forget the brackets!
>>> def edit_dashboard(request):
>>> # your code
```

18.1.7 dash.defaults module

18.1.8 dash.discover module

```
dash.discover.autodiscover()
```

Autodiscovers files that should be found by dash.

18.1.9 dash.exceptions module

```
\textbf{exception} \; \texttt{dash.exceptions.InvalidRegistryItemType}
```

Bases: exceptions.ValueError

Raised when an attempt is made to register an item in the registry which does not have a proper type.

```
exception dash.exceptions.LayoutDoesNotExist
```

Bases: exceptions. Exception

Raised when layout does not exist.

exception dash.exceptions.PluginWidgetOutOfPlaceholderBoundaries

Bases: exceptions. Exception

Raised when plugin widget is out of placeholder boundaries.

18.1.10 dash.fields module

```
class dash.fields.OrderField(verbose name=None,
                                                             name=None,
                                                                               primary key=False,
                                                                                     blank=False,
                                   max_length=None,
                                                              unique=False,
                                   null=False,
                                                  db\_index=False,
                                                                     rel=None,
                                                                                   default=<class
                                   django.db.models.fields.NOT_PROVIDED
                                                                             at
                                                                                     0x214c598>,
                                   editable=True,
                                                       serialize=True,
                                                                            unique_for_date=None,
                                   unique_for_month=None, unique_for_year=None, choices=None,
                                   help\ text=u'',
                                                      db\_column=None,
                                                                             db_tablespace=None,
                                  auto_created=False, validators=[], error_messages=None)
```

Bases: django.db.models.fields.IntegerField

@author http://djangosnippets.org/users/zenx/ @source http://djangosnippets.org/snippets/1861/

OrderField for models from http://ianonpython.blogspot.com/2008/08/orderfield-for-django-models.html and updated to use a django aggregation function. This field sets a default value as an auto-increment of the maximum value of the field +1.

Ignores the incoming value and instead gets the maximum plus one of the field.

This works really well in combination with "sortable_list.js". There are several things you should know:

- order field shall be null=True, blank=True
- order field shall not be unique

If above mentioned is True, you can use jQuery drag-n-drop widget in your Django-admin. See the following example:

class Media: # This belongs to your Admin class (admin.ModelAdmin)

```
18.1.11 dash.forms module
class dash.forms.DashboardWorkspaceForm(*args, **kwargs)
    Bases: django.forms.models.ModelForm
    Dashboard workspace form.
    class Meta
        exclude = ('position', 'layout_uid')
        model
            alias of DashboardWorkspace
    DashboardWorkspaceForm.base_fields = {'user': <django.forms.models.ModelChoiceField object at 0x32cd150>
    DashboardWorkspaceForm.declared_fields = {}
    DashboardWorkspaceForm.media
18.1.12 dash.helpers module
dash.helpers.slugify_workspace(s)
dash.helpers.lists_overlap(sub, main)
18.1.13 dash.models module
class dash.models.DashboardSettings(*args, **kwargs)
    Bases: django.db.models.base.Model
    Dashboard settings.
```

Properties

- user (django.contrib.auth.models.User: User owning the plugin.
- layout_uid (str): Users' preferred layout.
- title (str): Dashboard title.
- *is_public* (bool): If set to True, available as public (read-only mode).

exception DoesNotExist

```
Bases: django.core.exceptions.ObjectDoesNotExist
```

exception DashboardSettings.MultipleObjectsReturned

Bases: django.core.exceptions.MultipleObjectsReturned

DashboardSettings.objects = <django.db.models.manager.Manager object at 0x243e990>

DashboardSettings.user

```
class dash.models.DashboardWorkspace(*args, **kwargs)
```

Bases: django.db.models.base.Model

Dashboard workspace.

Properties

- user (django.contrib.auth.models.User: User owning the plugin.
- layout_uid (str): Layout to which the entry belongs to.

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- name (str): Dashboard name.
- *slug* (str): Dashboard slug.
- position (int): Dashboard position.

exception DoesNotExist

Bases: django.core.exceptions.ObjectDoesNotExist

exception DashboardWorkspace.MultipleObjectsReturned

Bases: django.core.exceptions.MultipleObjectsReturned

DashboardWorkspace.dashboardentry_set

DashboardWorkspace.get_absolute_url(*moreargs, **morekwargs)

Absolute URL, which goes to the dashboard workspace page.

Return str

DashboardWorkspace.get_entries(user)

Gets all dashboard entries for user given.

Parameters user (django.contrib.auth.models.User) –

Return iterable

DashboardWorkspace.objects = <django.db.models.manager.Manager object at 0x2494390>

DashboardWorkspace.user

class dash.models.DashboardEntry (*args, **kwargs)

Bases: django.db.models.base.Model

Dashboard entry (widget).

Since workspace can be nullable (default), we duplicate the *layout_uid*.

Properties

- user (django.contrib.auth.models.User: User owning the plugin.
- *workspace* (dash.models.DashboardWorkspace): Workspace to which the plugin belongs to. If left blank, entry belongs to default workspace.
- layout_uid (str): Layout to which the entry belongs to.
- placeholder_uid (str): Placeholder to which the entry belongs to.
- plugin_uid (str): Plugin name.
- plugin_data (str): JSON formatted string with plugin data.
- position (int): Entry position.

exception DoesNotExist

Bases: django.core.exceptions.ObjectDoesNotExist

$\textbf{exception} \ \texttt{DashboardEntry}. \textbf{MultipleObjectsReturned}$

Bases: django.core.exceptions.MultipleObjectsReturned

DashboardEntry.get_plugin (fetch_related_data=False, request=None)

Gets the plugin class (by plugin_name property), makes an instance of it, serves the data stored in plugin_data field (if available). Once all is done, plugin is ready to be rendered.

Parameters fetch_related_data (*bool*) – When set to True, plugin is told to re-fetch all related data (stored in models or other sources).

Return dash.base.DashboardPlugin Subclass of dash.base.DashboardPlugin.

```
DashboardEntry.objects = <dash.models.DashboardEntryManager object at 0x2494a50>
     DashboardEntry.plugin_uid_code()
         Mainly used in admin.
     DashboardEntry.user
     DashboardEntry.workspace
class dash.models.DashboardPlugin(*args, **kwargs)
     Bases: django.db.models.base.Model
     Dashboard plugin. Used when dash.settings.RESTRICT_PLUGIN_ACCESS is set to True.
         Properties
               • plugin_uid (str): Plugin UID.
               • users (django.contrib.auth.models.User): White list of the users allowed to use the dash-
                board plugin.
               • groups (django.contrib.auth.models.Group): White list of the user groups allowed to use the
                dashboard plugin.
     exception DoesNotExist
         Bases: django.core.exceptions.ObjectDoesNotExist
     exception DashboardPlugin.MultipleObjectsReturned
         Bases: django.core.exceptions.MultipleObjectsReturned
     DashboardPlugin.groups
     DashboardPlugin.groups_list()
         Flat list (comma separated string) of groups allowed to use the dashboard plugin. Used in Django admin.
             Return str
     DashboardPlugin.objects = <dash.models.DashboardPluginManager object at 0x24974d0>
     DashboardPlugin.plugin_uid_admin()
         Mainly used in admin.
     DashboardPlugin.plugin_uid_code()
         Mainly used in admin.
     DashboardPlugin.users
     DashboardPlugin.users_list()
```

Return str

18.1.14 dash.settings module

• RESTRICT_PLUGIN_ACCESS (bool): If set to True, (Django) permission system for dash plugins is enabled.

Flat list (comma separated string) of users allowed to use the dashboard plugin. Used in Django admin.

- *PLUGINS_MODULE_NAME* (str): Name of the module to placed in the (external) apps in which the dash plugin code should be implemented and registered.
- ACTIVE_LAYOUT (str): Active layout UID.
- LAYOUTS_MODULE_NAME (str): Name of the python module to be placed in (external) apps in which the dash layouts should be implemented and registered.
- DEFAULT_WORKSPACE_NAME (str): Name of the default workspace.

- DEFAULT_PLACEHOLDER_VIEW_TEMPLATE_NAME (str): Default template name for the placeholder view.
- DEFAULT_PLACEHOLDER_EDIT_TEMPLATE_NAME (str): Default template name for the placeholder edit.
- LAYOUT_CELL_UNITS (str): Layout cell units. Allowed values are em, px, pt, %.
- DISPLAY_AUTH_LINK (bool): If set to True, the log in or log out link is shown in the Dash drop-down menu.
- DEBUG

18.1.15 dash.tests module

```
class dash.tests.DashBrowserTest (methodName='runTest')
     Bases: django.test.testcases.LiveServerTestCase
     django-dash browser tests.
     TODO: At the moment is done for admin only. Normal users shall be tested as well for plugin security workflow
     (permissions system used).
     LIVE SERVER URL = None
     e = AttributeError("module' object has no attribute 'LIVE SERVER URL",)
     classmethod setUpClass()
     classmethod tearDownClass()
     test 01 add dashboard entry (*args, **kwargs)
     test_02_edit_dashboard_entry(*args, **kwargs)
     test_03_delete_dashboard_entry(*args, **kwargs)
class dash.tests.DashCoreTest (methodName='runTest')
     Bases: django.test.testcases.TestCase
     Tests of django-dash core functionality.
     setUp()
     test_01_registered_layouts(*args, **kwargs)
     test_02_active_layout(*args, **kwargs)
     test_03_get_layout_placeholders(*args, **kwargs)
     test_04_active_layout_render_for_view(*args, **kwargs)
     test_05_get_occupied_cells(*args, **kwargs)
dash.tests.create_dashboard_user()
     Create a user for testing the dashboard.
     TODO: At the moment an admin account is being tested. Automated tests with diverse accounts are to be
     implemented.
dash.tests.print_info(func)
     Prints some useful info.
dash.tests.setup_dash()
     Set up dash.
```

18.1.16 dash.urls module

18.1.17 dash.utils module

dash.utils.get_allowed_plugin_uids(user)

Gets allowed plugins uids for user given.

Parameters import User (django.contrib.auth.models) –

Return list

dash.utils.get_user_plugins(user)

Gets a list of user plugins in a form if tuple (plugin name, plugin description). If not yet autodiscovered, autodiscovers them.

Return list

dash.utils.get_user_plugin_uids()

Gets a list of user plugin uids as a list. If not yet autodiscovered, autodiscovers them.

Return list

dash.utils.get_widgets(layout, placeholder, user=None, workspace=None, position=None, occupied cells=[])

Gets widgets. In case if in restricted mode (RESTRICT_PLUGIN_ACCESS is set to True), user argument should be provided. Based on it, the list of plugins is returned. Restrictions are bypassed in case if RESTRICT_PLUGIN_ACCESS is set to False or user given is a superuser.

Placeholders are validated already. We don't need to have validation here.

Parameters

- **layout** (dash.base.BaseDashLayout) Layout object.
- placeholder_uid (str) Placeholder uid.
- **user** (*django.contrib.auth.models.User*) –
- workspace (str) Workspace slug.
- **position** (*int*) Plugin position.
- occupied_cells (*list*) List of already occupied cells.

Return list

dash.utils.update_plugin_data()

Updates the plugin data for all dashboard entries of all users. Rules for update are specified in the plugin itself.

```
dash.utils.sync_plugins()
```

Syncs the registered plugin list with data in dash.models.DashboardPlugin.

dash.utils.get_workspaces (user, layout_uid=None, workspace=None, public=False)

Gets previous, current, next and and a queryset of all workspaces.

Parameters

- workspace (str) –
- django.contrib.auth.models.User -

Return dict

dash.utils.build_cells_matrix(user, layout, placeholder, workspace=None)

Builds the cells matrix.

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Parameters

- **user** (django.contrib.auth.models.User) –
- placeholder_uid (str) -
- workspace (str) Workspace slug.

Return list List of cells occupied.

${\tt dash.utils.get_or_create_dashboard_settings}~(\textit{user})$

Gets dashboard settings for the user given. If no settings found, creates default settings.

Parameters django.contrib.auth.models.User -

Return dash.models.DashboardSettings Returns dash.models.DashboardSettings instance.

dash.utils.get_dashboard_settings(username)

Gets dashboard settings for the user given. If no settings found, creates default settings.

Parameters username (str) -

Return dash.models.DashboardSettings Returns dash.models.DashboardSettings instance.

dash.utils.get_public_dashboard_url (dashboard_settings)

Gets resolved public dashboard URL (if public dashboard app is installed == present in the global urls module of the project).

Parameters dash. models. DashboardSettings - Instance of dash. models. DashboardSettings.

Return str

18.1.18 dash.views module

dash.views.add_dashboard_entry (request, *args, **kwargs)
 Add dashboard entry.

Parameters

- **request** (*django.http.HttpRequest*) –
- placeholder uid (str) Placeholder UID.
- **plugin_uid** (*str*) Plugin UID.
- workspace (str) Workspace slug.
- **position** (*int*) If given, provided as position for the plugin (conflict resolution should take place).
- template_name (str) -
- **template_name_ajax** (*str*) Template used for AJAX requests.

Return django.http.HttpResponse

dash.views.create_dashboard_workspace(request, *args, **kwargs)
Create dashboard workspace.

1

Parameters

- request (django.http.HttpRequest) –
- template_name (str) -

• **template_name_ajax** (*str*) – Template used for AJAX calls.

Return django.http.HttpResponse

dash.views.dashboard(request, *args, **kwargs)
Dashboard.

Parameters

- **request** (*django.http.HttpRequest*) –
- workspace (*str*) Workspace slug. If given, the workspace loaded. Otherwise we deal with no workspace.

Return django.http.HttpResponse

Parameters

- request (django.http.HttpRequest) –
- workspace (str) Workspace slug.
- template_name (str) -
- **template_name_ajax** (*str*) Tempalte used for AJAX requests.

Return django.http.HttpResponse

dash.views.delete_dashboard_entry(request, *args, **kwargs)
Remove dashboard entry.

Parameters

- request (django.http.HttpRequest) –
- id (int) ID of the dashboard entry to delete.

Return django.http.HttpResponse

dash.views.delete_dashboard_workspace(request, *args, **kwargs)

Delete dashboard workspace.

Parameters

- request (django.http.HttpRequest) –
- id (int) DashboardWorkspace id.
- template name (str) –
- template_name_ajax (str) Template used for AJAX calls.

Return django.http.HttpResponse

dash.views.edit_dashboard(request, *args, **kwargs)
Edit dashboard.

Parameters

- request (django.http.HttpRequest) –
- workspace (*str*) Workspace slug. If given, the workspace loaded. Otherwise we deal with no workspace.

Return django.http.HttpResponse

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```
dash.views.edit_dashboard_entry(request, *args, **kwargs)
Edit dashboard entry.
```

Parameters

- request (django.http.HttpRequest) –
- id (int) ID of the dashboard entry to edit.
- template_name (str) -
- **template_name_ajax** (*str*) Tempalte used for AJAX requests.

Return django.http.HttpResponse

```
dash.views.edit_dashboard_settings(request, *args, **kwargs)
Edit dashboard settings.
```

Parameters

- **request** (*django.http.HttpRequest*) –
- template_name (str) –
- **template_name_ajax** (*str*) Template used for AJAX calls.

Return django.http.HttpResponse

```
dash.views.edit_dashboard_workspace(request, *args, **kwargs)
Edit dashboard workspace.
```

Parameters

- request (django.http.HttpRequest) –
- id (int) DashboardWorkspace ID.
- template_name (str) –
- template_name_ajax (str) Template used for AJAX calls.

Return django.http.HttpResponse

```
dash.views.plugin_widgets(request, *args, **kwargs)
```

Plugin widgets view. Lists all the widgets for the placeholder and workspace given.

Parameters

- request (django.http.HttpRequest) –
- placeholder_uid (str) Placeholder UID.
- **position** (*int*) Position on the dashboard to which the widget is to be added.
- template_name (str) -
- **template_name_ajax** (*str*) Tempalte used for AJAX requests.

Return django.http.HttpResponse

18.1.19 dash.widgets module

```
class dash.widgets.BooleanRadioSelect(*args, **kwargs)
    Bases: django.forms.widgets.RadioSelect
```

Boolean radio select for Django.

Example

```
>>> class DummyForm(forms.Form):
>>> agree = forms.BooleanField(label=_("Agree?"), required=False, widget=BooleanRadioSelect)
media
```

18.1.20 Module contents

18.1. dash package

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