
django-userextensions Documentation

Release 0.1.4

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Aug 08, 2022

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1.1 About

django-userextensions is a reusable django application that extends the user model to provide profile settings, tracking of user favorites and recently viewed urls and other user-based functionality and service account management.

See details on django-extensions features on the [Features](#) page

1.1.1 Requirements & Dependencies

django-userextensions is built on Python 3.6.x and Django 2.2.x. For a full list of packages and requirements, please see the requirements.txt file.

<https://github.com/davidslusser/django-userextensions/blob/master/requirements.txt>

1.2 Installation

The django-userextensions package is available on Python Package Index (PyPI) and can be installed via pip with the following command:

```
pip install django-userextensions
```

1.2.1 Adding django-userextensions to your django project

To use django-userextensions in your project, add 'userextensions' to INSTALLED_APPS in your settings.py file and run `manage.py migrate` to create the required database structure.

```
INSTALLED_APPS = [
    ...
    'userextensions',
]
```

1.2.2 Optional Feature Configurations

To include recents tracking, add `'userextensions.middleware.UserRecentsMiddleware'` to your middleware.

```
MIDDLEWARE = [
    ...
    'userextensions.middleware.UserRecentsMiddleware',
]
```

By default, some fixed URLs and URLs with specific prefixes are excluded from being stored in recents. These can be modified by setting the `SKIP_URL_PREFIX_LIST` and `SKIP_FIXED_URL_LIST` parameters in the `settings.py` file. URLs stored in recents can also be filtered by http request methods. By default only `GET` is enabled. This can be modified by changing the `TRACK_METHOD_LIST` parameter in the `settings.py` file.

```
SKIP_URL_PREFIX_LIST = ['/admin/', '/__debug__/', ]
SKIP_FIXED_URL_LIST = ['/', '/login/', '/logout/', ]
TRACK_METHOD_LIST = ['GET', ]
```

Several views, with applicable templates, are provided for use. Note, action-based views, such as `RefreshApiToken` and `UserLoginRedirect` do not require templates. Views with GUIs, such as list and detail pages, include templates with requirements including Twitter Bootstrap. An included base template will be used for these views. You can override this by setting the `BASE_TEMPLATE` parameter to your preferred base template in the `settings.py` file.

To use these, set the `BASE_TEMPLATE` parameter in the `settings.py` file and include the `userextensions.urls` your project-level `urls.py` file.

```
from userextensions.urls import *

urlpatterns = [
    ...
    path('', include('userextensions.urls'), ),
]
```

```
BASE_TEMPLATE = 'location_of_your_base_template'
```

To allow the custom user start page, update the `LOGIN_REDIRECT_URL` parameter in your `settings.py` file to point to the `userextensions.user_login_redirect` view. Optionally, the `LOGIN_REDIRECT_URL_DEFAULT` parameter can be set to define the page redirected to when a user does not have a start page configured.

```
LOGIN_REDIRECT_URL = '/userextensions/user_login_redirect'
LOGIN_REDIRECT_URL_DEFAULT = 'myapp/some_cool_page'
```

1.3 Features

This document details the features currently available in `django-userextensions`.

1.3.1 log-in redirect

Users can define a specific page to be routed to after login. This is set in the `UserPreference` model with the `start_page` field. When configured, the page specified will be displayed after the user logs in. If no `start_page` for the user is set, the value set in the `LOGIN_REDIRECT_URL_DEFAULT` parameter in `settings.py` will be used. If the `LOGIN_REDIRECT_URL_DEFAULT` is not set, the project root `'/'` will be used. the project root will be displayed after login.

Start page can be set using the `SetStartPage` view, available via the `userextensions:set_start_page` URL. When called, the referred URL will be set as the users start page. To enable this feature, ensure the three configuration steps below.

1. add 'userextensions' to the `INSTALLED_APPS`:

```
INSTALLED_APPS = [
    ...
    'userextensions',
]
```

2. set the `LOGIN_REDIRECT_URL` parameter in your `settings.py` file:

```
LOGIN_REDIRECT_URL = '/userextensions/user_login_redirect'
LOGIN_REDIRECT_URL_DEFAULT = '/'
```

3. include the `userextensions.urls` your project-level `urls.py` file:

```
from userextensions.urls import *

urlpatterns = [
    ...
    path('', include('userextensions.urls'), ),
]
```

1.3.2 user-defined favorites

This application allows for users to add URLs as favorites, which capture the full URL including query parameters. A favorite can be saved by using the `AddFavorite` view, accessible from the `userextensions:add_favorite` URL. Favorites can be deleted by using the `DeleteFavorite` view, accessible from the `userextensions:delete_favorite` URL. Additionally, there is a `ListFavorites` view available at `userextensions:list_favorites` that uses a Twitter Bootstrap based table to list a users favorites.

1.3.3 recently viewed URLs

Recently viewed URLs (recents) can be tracked for users automatically using the included middleware. Users can individually configure the number of recents to track via `recents_count` field in the `UserPreference` model; this defaults to 25. Specific static URLs, or URLs with a particular prefix can be excluded by adjusting the `SKIP_URL_PREFIX_LIST` and `SKIP_FIXED_URL_LIST` parameters in the `settings.py` file. URLs stored in recents can also be filtered by http request methods. By default only `GET` is enabled. This can be modified by changing the `TRACK_METHOD_LIST` parameter in the `settings.py` file. Additionally, there is a `ListRecents` view available at `userextensions:list_recents` that uses a Twitter Bootstrap based table to list a users favorites.

To enable recents tracking, ensure the three configuration steps below.

1. add the middleware in `settings.py`:

```
MIDDLEWARE = [
    ...
    'userextensions.middleware.UserRecentsMiddleware',
]
```

2. set the required parameters in settings.py:

```
SKIP_URL_PREFIX_LIST = ['/admin/', '/__debug__/', ]
SKIP_FIXED_URL_LIST = ['/', '/login/', '/logout/', ]
TRACK_METHOD_LIST = ['GET', ]
```



3. include the userextensions.urls your project-level urls.py file:

```
from userextensions.urls import *

urlpatterns = [
    ...
    path('', include('userextensions.urls'), ),
]
```

1.3.4 user-defined preferences

User preferences, for settings like theme, start page, recents count, etc. are available in the User-Preference model. A view for displaying and editing these preferences, `DetailUser`, is available at `userextensions:detail_user` which uses Twitter Bootstrap. On this page there are links to refresh the API token and edit available preferences.

User Profile: david

Is Active:	<input checked="" type="checkbox"/>
Is Staff:	<input checked="" type="checkbox"/>
Is Superuser:	<input checked="" type="checkbox"/>
Date Joined:	Aug. 23, 2020, 11:52 p.m.
API Token:	ac845c35c19bcfe87d13ac9653f8c3b1ddafca65 
Theme:	None
Recents Count:	25
Start Page:	5
Edit:	

admins

group_002

group_003

test001

1.3.5 service account management

Version 0.0.10 of django-userextensions introduces service account management and provides the ability to link a service account to an existing group. By default one service account per group is allowed. Adding a service account creates a new User (`django.contrib.auth.models.User`) and a new entry in the ServiceAccount (`userex-`

tensions.models.ServiceAccount) that links the created user and group. A DRF API token is created automatically. The User username is created based on the group name and optional service account prefix and service account suffix. These can be set in django settings with the following parameters: `SRV_ACCOUNT_PREFIX` and `SRV_ACCOUNT_SUFFIX`. If neither of these parameters are set, the default name will be used: `<group>_srv`.


The name used for the service account can be filtered via regex pattern if the `SRV_ACCOUNT_GROUP_FILTER_LIST` parameter is set in the django settings. This variable is a list of regular expressions. Matched group 1 of the first pattern matched will be used for the service account name. For example, if you have a group named `'team_web_ops'` and want your service account name to be `web_ops_service`, the regex `'team_(S+)'` can be used.

A view for displaying and editing these preferences, `ManageServiceAccounts`, is available at `userextensions:manage_service_accounts` which uses Twitter Bootstrap. This page provides a list of all current service accounts the current user has rights to and all groups without a service account. This is based on existing groups the user is a member of; self-service actions are also available.


Self-service actions on this page include:

- display service account API token
- refresh API token
- enable/disable service account
- delete service account
- list users in group
- create service account

Manage Service Accounts:



User Account	Group	Enabled	Actions
admins_srv	admins	✓	
group_002_srv	group_002	✓	



Group	User Count	Actions
group_003	3	+
test001	1	+

1.4 Internals

The documentation below details some of the internal workings of django-userextensions and its components. This documentation is automatically generated from the source code. See the source code in github for full details.

<https://github.com/davidslusser/django-userextensions>

1.4.1 Middleware

class `userextensions.middleware.UserRecentsMiddleware` (*get_response=None*)

This middleware parses data from requests and, where applicable, stores the full url path in the request to the users list of recently viewed pages (recents). No recents will be stored if the user is not authenticated, user can not be determined, or if the URL is invalid.

Tracking can be filtered by methods, URL prefixes, and static URLs via parameters in the settings.py file. The following are configurable:

method: tracks only specified methods; defaults to GET `TRACK_METHOD_LIST = ['GET',]`

URL prefixes: will not track URLs that start with the specified prefixes

`SKIP_URL_PREFIX_LIST = ['/admin/', '/__debug__/']`

static URLs: will not track the specified URLs `SKIP_FIXED_URL_LIST = ['/', '/login/', '/logout/',]`

process_request (*request*)

read user and url (path) from request, if valid and not in a skip list, add to recents

1.4.2 Signals

`userextensions.signals.add_user_preference` (*sender, instance, created, **kwargs*)

This post-save signal adds a UserPreference object when a User is created

`userextensions.signals.trim_recents` (*sender, instance, created, **kwargs*)

This post-save signal trims a users recents to only maintain the x most recent urls, where x is the recents_count configured in the UserPreference table

`userextensions.signals.create_srv_account_token` (*sender, instance, created, **kwargs*)

This post-save signal creates a drf token when a new ServiceAccount is created

1.4.3 Models

class `userextensions.models.Theme` (**args, **kwargs*)

This model tracks themes. It can be used to provide user preferred frontend styling options based on defined css files.

exception `DoesNotExist`

exception `MultipleObjectsReturned`

class `userextensions.models.UserPreference` (**args, **kwargs*)

This table tracks user preferences. Fields include theme, recents_count, page_refresh_time, and start_page.

exception `DoesNotExist`

exception `MultipleObjectsReturned`

timezone

<https://stackoverflow.com/questions/48383549/how-to-show-local-time-in-template>

class `userextensions.models.UserRecent` (**args, **kwargs*)

This table stored recently visited urls.

exception `DoesNotExist`

exception `MultipleObjectsReturned`

```
class userextensions.models.UserFavorite (*args, **kwargs)
    This table stores user-defined favorites.

    exception DoesNotExist

    exception MultipleObjectsReturned
```

```
class userextensions.models.ServiceAccount (*args, **kwargs)
    This table stores service accounts and maps to a (service account) user and group

    exception DoesNotExist

    exception MultipleObjectsReturned

    clean ()
        clean/update/validate data before saving

    create_drf_token ()
        create a drf token for this service account

    save (*args, **kwargs)
        Save the current instance. Override this in a subclass if you want to control the saving process.

        The 'force_insert' and 'force_update' parameters can be used to insist that the "save" must be an SQL
        insert or update (or equivalent for non-SQL backends), respectively. Normally, they should not be set.
```

1.4.4 Action Views

This file contains views that perform a well defined action and redirect to a rendered page, typically the referrer. No page rendering views are contained here.

```
class userextensions.views.action.RefreshApiToken (**kwargs)
    delete current user API (auth) token and create a new one
```

```
class userextensions.views.action.RefreshSrvAcctApiToken (**kwargs)
    delete current the API (auth) token for a provided service account and create a new one
```

```
class userextensions.views.action.AddFavorite (**kwargs)
    add (the current) url to the list of user favorites
```

```
class userextensions.views.action.DeleteFavorite (**kwargs)
    delete a favorite (by pk) and return to the referring page

    delete (request, *args, **kwargs)
        Call the delete() method on the fetched object and then redirect to the success URL.
```

```
class userextensions.views.action.DeleteRecent (**kwargs)
    delete a recent (by pk) and return to the referring page

    delete (request, *args, **kwargs)
        Call the delete() method on the fetched object and then redirect to the success URL.
```

```
class userextensions.views.action.UserLoginRedirect (**kwargs)
    Check if a user has a preferred 'start page' to load after login. If so, redirect to that page after login, else redirect
    to the project root page. To enable this redirect, set the LOGIN_REDIRECT_URL parameter in the settings.py
    to /userextensions/user_login_redirect and include userextensions.urls in the project level urls.py
```

```
class userextensions.views.action.SetStartPage (**kwargs)
    set the current page as the users preferred 'start page' to be redirected to after login
```

```
class userextensions.views.action.CreateServiceAccount (**kwargs)
    create a new service account based on a provided group
```

```
class userextensions.views.action.DeleteServiceAccount (**kwargs)
    delete a service account
```

```
class userextensions.views.action.EnableServiceAccount (**kwargs)
    enable a service account
```

```
class userextensions.views.action.DisableServiceAccount (**kwargs)
    disable a service account
```

1.4.5 GUI Views

This file contains views that render a specific page for the gui.

```
class userextensions.views.gui.ListRecents (**kwargs)
    Displays a list of urls the user has recently visited, rendered in a paginated, searchable, sortable bootstrap table.
    This view is filterable via query parameters. Includes links to delete individual entries.
```

```
class userextensions.views.gui.ListFavorites (**kwargs)
    Displays a list of urls user has set as favorites, rendered in a paginated, searchable, sortable bootstrap table. This
    view is filterable via query parameters. Includes links to delete individual entries.
```

```
class userextensions.views.gui.DetailUser (**kwargs)
    Displays user details, including group configuration, API token, and configuration for theme, start page, and
    recents count. Includes link to refresh API token and modal form to edit user preferences.
```

```
class userextensions.views.gui.ManageServiceAccounts (**kwargs)
    Displays service accounts this user can access (service accounts that are linked to groups this owner is a member
    of). Provides mechanisms for users to create service accounts for applicable groups, refresh API tokens, and
    enable/disable service accounts
```

1.5 Version History

1.6 LICENSE

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Version 2.0, January 2004

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