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# Django Magic Notifier

*Release 0.2.3*

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**Jul 11, 2023**



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## INSTALLATION

You can install **Django Magic Notifier** via various ways

PIP:

```
> pip install django-magic-notifier
```

Git:

```
> git clone https://github.com/jefcolbi/django-magic-notifier
> cd django-magic-notifier
> python setup.py install
```

If you intend to use Push notifications, then you need to include DMN consumers in your django channels routing

Python:

```
application = ProtocolTypeRouter({
    # Django's ASGI application to handle traditional HTTP requests
    "http": django_asgi_app,

    # WebSocket chat handler
    "websocket": URLRouter([
        path("ws/notifications/<str:token>/", PushNotifConsumer.as_asgi()),
    ])
})
```



## SETTINGS

Django Magic Notifier works mainly with settings. Many objects used by DMN are configurable

### 2.1 GENERAL SETTINGS

All the next settings goes in a dictionary named NOTIFIER, for example:

```
NOTIFIER = {  
    'THREADED': True  
}
```

Enable, disable email notifications, Default True (Enabled):

```
'EMAIL_ACTIVE': True
```

Enable, disable sms notifications, Default False (Disabled):

```
'SMS_ACTIVE': False
```

Enable, disable push notifications, Default False (Disabled):

```
'PUSH_ACTIVE': False
```

Threading, sending or not notifications in background. Default False:

```
'THREADED': False
```

### 2.2 NOTIFIER EMAIL SETTINGS

The next settings goes in a dictionary named EMAIL in NOTIFIER, like this:

```
NOTIFIER = {  
    'EMAIL': {  
    }  
}
```

Specify the default EMAIL gateway:

```
'DEFAULT_GATEWAY': 'default'
```

Specifying an email gateway is by adding a dictionary in the EMAIL dictionary:

```
'default': {
    "CLIENT": "magic_notifier.email_clients.django_email.DjangoEmailClient"
    "HOST": "",
    "PORT": 0,
    "USER": "",
    "FROM": "",
    "PASSWORD": "",
    "USE_SSL": False,
    "USE_TLS": False,
}
```

Full example:

```
NOTIFIER = {
    'EMAIL': {
        'DEFAULT_GATEWAY': 'smtp_1',
        'smtp_1': {
            "CLIENT": "magic_notifier.email_clients.django_email.DjangoEmailClient"
            "HOST": "",
            "PORT": 0,
            "USER": "",
            "FROM": "",
            "PASSWORD": "",
            "USE_SSL": False,
            "USE_TLS": False,
        },
        'smtp_2': {
            "CLIENT": "magic_notifier.email_clients.django_email.DjangoEmailClient"
            "HOST": "",
            "PORT": 0,
            "USER": "",
            "FROM": "",
            "PASSWORD": "",
            "USE_SSL": False,
            "USE_TLS": False,
        },
        'custom': {
            "CLIENT": "app.email_clients.CustomEmailClient"
            "Option1": "",
            "Option2": 0,
            "Option3": "",
        }
    }
}
```



## 2.3 NOTIFIER SMS SETTINGS

The next settings goes in a dictionary named SMS in NOTIFIER, like this:

```
NOTIFIER = {
    'SMS': {

    }
}
```

Specify the default EMAIL gateway:

```
'DEFAULT_GATEWAY': 'default'
```

Specifying a sms gateway is by adding a dictionary in the SMS dictionary:

```
'default': {
    "CLIENT": "magic_notifier.sms_clients.twilio_client.TwilioClient"
    "ACCOUNT": "",
    "TOKEN": 0,
    "FROM_NUMBER": "",
}
```

Full example:

```
NOTIFIER = {
    'SMS': {
        'DEFAULT_GATEWAY': 'twilio',
        'twilio': {
            "CLIENT": "magic_notifier.sms_clients.twilio_client.TwilioClient"
            "ACCOUNT": "",
            "TOKEN": 0,
            "FROM_NUMBER": "",
        },
        'custom': {
            "CLIENT": "app.sms_clients.CustomEmailClient"
            "Option1": "",
            "Option2": 0,
            "Option3": "",
        }
    }
}
```

DMN needs a way to get a phone number from a User object. GET USER NUMBER must be path a function that accepts one parameter of type User. Default `'magic_notifier.utils.get_user_number'`:

```
'GET_USER_NUMBER': 'path.to.function'
```

## 2.4 NOTIFIER PUSH SETTINGS

To connect to push notification websocket, a client must have a token. You need to specify a path to a function that returns a token given a User instance. The signature of the function must be:

```
def get_token_from_user(user) -> str:
```

Setting example:

```
NOTIFIER = {  
    "USER_FROM_WS_TOKEN_FUNCTION": 'magic_notifier.utils.get_user_from_ws_token'  
}
```

## TEMPLATES

Django Magic Notifier supports templates out of the box. To add new templates to your project to be used with DMN, you have to create a folder named **notifier** in one of your template's folder.

If your app name is **app\_name** then create a directory **app\_name/templates/notifier**

Now suppose you want to have a template named hello, then within the newly created folder created another folder like that **app\_name/templates/notifier/hello**

Now in this folder you have to create some files depending on how you will send your notifications. If you will send your notification via email then you must create two files within the hello folder named **email.html** and **email.txt** or **email.mjml** and **email**. Because DMN supports also mjml via 3rd party package. If you will send notifications via sms then you must create a file named **sms.txt**. If you want to send push notification then you must create a file **push.json**

It is a common behavior to have a base template, you can do the same by creating a folder named **base** in the notifier folder and creating the files **email.html**, **email.txt** and **sms.txt**.

Django Magic Notifier is shipped with some base templates that you can use. Let look at this example:

*app\_name/templates/notifier/base/email.html:*

```
{% extends "base_notifier/email.html" %}
```

*app\_name/templates/notifier/base/email.txt:*

```
{% extends "base_notifier/email.txt" %}
```

*app\_name/templates/notifier/base/sms.txt:*

```
{% extends "base_notifier/sms.txt" %}
```

*app\_name/templates/notifier/base/push.json:*

```
{% extends "base_notifier/push.json" %}
```

Now in the hello template folder, you do:

*app\_name/templates/notifier/hello/email.html:*

```
{% extends "notifier/base/email.html" %}
{% block content %}
<tr>
  <td><p>Hello {{ user.email }}
  </td>
</tr>
{% endblock %}
```

*app\_name/templates/notifier/hello/email.txt:*

```
{% extends "notifier/base/email.txt" %}
{% block content %}
>Hello {{ user.email }}
{% endblock %}
```

*app\_name/templates/notifier/hello/email.mjml:*

```
<mjml>
  <mj-head>
    <mj-attributes>
      <mj-text align="center" color="#555" />
    </mj-attributes>
  </mj-head>
  <mj-body background-color="#eee">
    <mj-section>
      <mj-column>
        My Logo
      </mj-column>
    </mj-section>
    <mj-section background-color="#fff">
      <mj-column>
        <mj-text align="center">
          <h2>Welcome</h2>
        </mj-text>
        <mj-text>
          Welcome to our company
        </mj-text>
      </mj-column>

      </mj-section>
      <mj-section>
        <mj-column>
          <mj-text> My Company </mj-text>
        </mj-column>
      </mj-section>
    </mj-body>
  </mjml>
```

*app\_name/templates/notifier/hello/sms.txt:*

```
{% extends "notifier/base/sms.txt" %}
{% block content %}
>Hello {{ user.email }}
{% endblock %}
```

*app\_name/templates/notifier/hello/push.json:*

```
{% extends "notifier/base/push.json" %}
{% block subject %}Hello {{ user.username }}{% endblock %}
```

**USAGE**

Send an email with a direct final string (no template) to a user instance:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, [user], final_message="Nice if you get this")
```

Send an email with a template (hello) to a user instance:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, [user], template='hello')
```

Send an email with a template to all superuser:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, "admins", template='hello')
```

Send an email with a template to all staff users:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, "staff", template='hello')
```

Send an email with a template to all users:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, "all", template='hello')
```

Send an email with a template to all users excluding staff:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, "all-staff", template='hello')
```

Send an email with a file and a template to all users:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email"], subject, "all-staff", template='hello',
      files=['path/to/file.ext'])
```

Send a sms with a direct message (no template) to a set of users:

```
users = User.objects.filter(pk<10)
subject = "Test magic notifier"
notify(["sms"], subject, users, final_message="Nice if you get this")
```

Send a sms with a template to a set of users:

```
users = User.objects.filter(pk<10)
subject = "Test magic notifier"
notify(["sms"], subject, users, template='hello')
```

Send an email and sms with a template to all users excluding staff:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email", 'sms'], subject, "all-staff", template='hello')
```

Send an email, a sms and a push notification with a template to all users excluding staff:

```
user = User(email="testuser@localhost", username="testuser")
subject = "Test magic notifier"
notify(["email", 'sms', 'push'], subject, "all-staff", template='hello')
```

## API REFERENCE

This page contains auto-generated API reference documentation<sup>1</sup>.

### 5.1 magic\_notifier

#### 5.1.1 Subpackages

`magic_notifier.email_clients`

##### Submodules

`magic_notifier.email_clients.django_email`

##### Module Contents

##### Classes

---

*DjangoEmailClient*

---

`class magic_notifier.email_clients.django_email.DjangoEmailClient`

`classmethod get_connection(email_settings: dict)`

`magic_notifier.management`

##### Subpackages

`magic_notifier.management.commands`

##### Submodules

`magic_notifier.management.commands.test_email_template`

---

<sup>1</sup> Created with sphinx-autoapi

### Module Contents

#### Classes

---

<i>Command</i>	The command <i>test_email_template</i> is used to test a template email.
----------------	--

---

#### Attributes

---

<i>User</i>
-------------

---

`magic_notifier.management.commands.test_email_template.User`

```
class magic_notifier.management.commands.test_email_template.Command(stdout=None,
                                                                    stderr=None,
                                                                    no_color=False,
                                                                    force_color=False)
```

Bases: `django.core.management.base.BaseCommand`

The command *test\_email\_template* is used to test a template email. This is very useful in development.

**add\_arguments**(*parser*)

Entry point for subclassed commands to add custom arguments.

**handle**(\**args*, \*\**options*)

The actual logic of the command. Subclasses must implement this method.

`magic_notifier.sms_clients`

#### Submodules

`magic_notifier.sms_clients.base`

### Module Contents

#### Classes

---

<i>BaseSmsClient</i>
----------------------

---

```
class magic_notifier.sms_clients.base.BaseSmsClient
```

```
    abstract classmethod send(number: str, text: str, **kwargs)
```



---

`magic_notifier.sms_clients.cgsms_client`

## Module Contents

### Classes

---

*CGSmsClient*

---

### Attributes

---

*logger*

---

`magic_notifier.sms_clients.cgsms_client.logger`

```
class magic_notifier.sms_clients.cgsms_client.CGSmsClient
    Bases: magic_notifier.sms_clients.base.BaseSmsClient
    classmethod send(number: str, text: str, **kwargs)
```

`magic_notifier.sms_clients.nexa_client`

## Module Contents

### Classes

---

*NexaSmsClient*

---

### Attributes

---

*logger*

---

`magic_notifier.sms_clients.nexa_client.logger`

```
class magic_notifier.sms_clients.nexa_client.NexaSmsClient
    Bases: magic_notifier.sms_clients.base.BaseSmsClient
    classmethod send(number: str, text: str, **kwargs)
```

`magic_notifier.sms_clients.twilio_client`

## Module Contents

### Classes

---

*TwilioClient*

---

### Attributes

---

*logger*

---

`magic_notifier.sms_clients.twilio_client.logger`

**class** `magic_notifier.sms_clients.twilio_client.TwilioClient`

Bases: *magic\_notifier.sms\_clients.base.BaseSmsClient*

**classmethod** `send(number: str, text: str, **kwargs)`

## 5.1.2 Submodules

`magic_notifier.admin`

## Module Contents

### Classes

---

*NotificationAdmin*

Encapsulate all admin options and functionality for a given model.

---

**class** `magic_notifier.admin.NotificationAdmin(model, admin_site)`

Bases: `django.contrib.admin.ModelAdmin`

Encapsulate all admin options and functionality for a given model.

`magic_notifier.apps`

## Module Contents

### Classes

---

*NotifConfig*

---

Class representing a Django application and its configuration.

---

```
class magic_notifier.apps.NotifConfig(app_name, app_module)
    Bases: django.apps.AppConfig
    Class representing a Django application and its configuration.
    name = 'magic_notifier'
```

`magic_notifier.consumers`

## Module Contents

### Classes

---

*PushNotifConsumer*

---

### Attributes

---

*logger*

---

`magic_notifier.consumers.logger`

```
class magic_notifier.consumers.PushNotifConsumer(*args, **kwargs)
    Bases: channels.generic.websocket.WebsocketConsumer
    connect()
    disconnect(close_code)
    receive(text_data)
    notify(data: dict)
    notification(data: dict)
    unread(event: dict)
    markread(event: dict)
```

`magic_notifier.emailer`

## Module Contents

### Classes

---

<i>Emailer</i>	The class is responsible of email sending.
----------------	--

---

### Attributes

---

*logger*

---

`magic_notifier.emailer.logger`

**class** `magic_notifier.emailer.Emailer`(*subject: str, receivers: list, template: Optional[str], context: dict, email\_gateway: str = 'default', final\_message: str = None, files: list = None, \*\*kwargs*)

The class is responsible of email sending.

#### Parameters

- **subject** – the subject of the notification, ignored when send by sms
- **receivers** – list of User
- **template** – the name of the template to user. Default None
- **context** – the context to be passed to template. Default None
- **email\_gateway** – the email gateway to use. Default 'default'
- **final\_message** – the final message to be sent as the notification content, must be sent if template is None, template is ignored if it is sent. Default None
- **files** – list of files to be sent. accept file-like objects, tuple, file path. Default None
- **kwargs** –

`send()`

`_send()`

`magic_notifier.models`

### Module Contents

#### Classes

---

<i>JSONField</i>	Simple JSON field that stores python structures as JSON strings
<i>Notification</i>	
<i>NotifyProfile</i>	

---

## Attributes

---

### *User*

---

**class** magic\_notifier.models.JSONField(\*args, db\_collation=None, \*\*kwargs)

Bases: django.db.models.TextField

Simple JSON field that stores python structures as JSON strings on database.

**from\_db\_value**(value, \*args, \*\*kwargs)

**to\_python**(value)

Convert the input JSON value into python structures, raises django.core.exceptions.ValidationError if the data can't be converted.

**validate**(value, model\_instance)

Check value is a valid JSON string, raise ValidationError on error.

**get\_prep\_value**(value)

Convert value to JSON string before save

**value\_from\_object**(obj)

Return value dumped to string.

magic\_notifier.models.User

**class** magic\_notifier.models.Notification(\*args, \*\*kwargs)

Bases: django.db.models.Model

**id**

**user:** django.db.models.ForeignKey

**subject:** django.db.models.CharField

**text:** django.db.models.TextField

**type:** django.db.models.CharField

**sub\_type:** django.db.models.CharField

**link:** django.db.models.CharField

**image:** django.db.models.ImageField

**actions:** django.db.models.JSONField

**data:** django.db.models.JSONField

**read:** django.db.models.DateTimeField

**sent:** django.db.models.DateTimeField

**mode:** django.db.models.CharField

**\_\_str\_\_**()

**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.

**mark\_read()**

**class magic\_notifier.models.NotifyProfile(\*args, \*\*kwargs)**

Bases: django.db.models.Model

**id**

**phone\_number:** django.db.models.CharField

**current\_channel:** django.db.models.CharField

**user:** django.db.models.OneToOneField

**magic\_notifier.notifier**

## Module Contents

### Functions

---

<i>notify</i> (vias[, subject, receivers, template, context, ...])	This function send a notification via the method specified in parameter vias
--	--

---

### Attributes

---

*User*

---

*logger*

---

**magic\_notifier.notifier.User**

**magic\_notifier.notifier.logger**

**magic\_notifier.notifier.notify**(vias: list, subject: str = None, receivers: Union[str, list, django.db.models.QuerySet, django.db.models.Manager] = None, template: str = None, context: dict = None, final\_message: str = None, email\_gateway: str = 'default', sms\_gateway: Optional[str] = None, files: list = None, threaded: bool = None)

This function send a notification via the method specified in parameter vias

#### Parameters

- **vias** – accepted values are email,sms,push
- **subject** – the subject of the notification, ignored when send by sms

- **receivers** – it can be a list, queryset or manager of users. if a string is passed it must be *admins* to send to (super) admins, *staff* to send to staff only, *all* to all users, *all-staff* to all users minus staff and *all-admins* to all users excepted admins
- **template** – the name of the template to user. Default None
- **context** – the context to be passed to template. Note that the context is auto-filled with the current the notification is going under the key ‘user’. Default None
- **final\_message** – the final message to be sent as the notification content, must be sent if template is None, template is ignored if it is sent. Default None
- **email\_gateway** – the email gateway to use. Default ‘default’
- **sms\_gateway** – the sms gateway to use. Default to None
- **files** – list of files to be sent. accept file-like objects, tuple, file path. Default None
- **threaded** – if True, the notification is sent in background else sent with the current thread. Default to NOTIFIER[“THREADED”] settings

#### Returns

`magic_notifier.pusher`

### Module Contents

#### Classes

---

<i>Pusher</i>	:param subject:The subject of the notification
---------------	--

---

#### Attributes

---

<i>logger</i>
---------------

---

`magic_notifier.pusher.logger`

**class** `magic_notifier.pusher.Pusher`(*subject, receivers: list, template: str, context: dict, \*\*kwargs*)

:param subject:The subject of the notification :param receivers: The user list of receivers :param template: The template to use :param context:The context to pass to the template :param kwargs:

**send()**

**\_send()**

## `magic_notifier.serializers`

### Module Contents

#### Classes

---

*NotificationSerializer*

A *ModelSerializer* is just a regular *Serializer*, except that:

---

**class** `magic_notifier.serializers.NotificationSerializer`(*instance=None, data=empty, \*\*kwargs*)

Bases: `rest_framework.serializers.ModelSerializer`

A *ModelSerializer* is just a regular *Serializer*, except that:

- A set of default fields are automatically populated.
- A set of default validators are automatically populated.
- Default *.create()* and *.update()* implementations are provided.

The process of automatically determining a set of serializer fields based on the model fields is reasonably complex, but you almost certainly don't need to dig into the implementation.

If the *ModelSerializer* class *doesn't* generate the set of fields that you need you should either declare the extra/differing fields explicitly on the serializer class, or simply use a *Serializer* class.

When a field is instantiated, we store the arguments that were used, so that we can present a helpful representation of the object.

**class** `Meta`

**model**

**fields** = ('id', 'subject', 'text', 'type', 'sub\_type', 'link', 'mode', 'image', 'actions', 'data', 'read', 'sent')

## `magic_notifier.settings`

### Module Contents

`magic_notifier.settings.AVAILABLE_MODES` = [('user', 'User'), ('admin', 'Admin')]

`magic_notifier.settings.NOTIFIER_SETTINGS`

`magic_notifier.settings.EMAIL_ACTIVE`

`magic_notifier.settings.SMS_ACTIVE`

`magic_notifier.settings.PUSH_ACTIVE`

`magic_notifier.settings.NOTIFIER_AVAILABLE_MODES`

`magic_notifier.settings.NOTIFIER_DEFAULT_MODE`

`magic_notifier.settings.NOTIFIER_THREADED`



`magic_notifier.settings.NOTIFIER_EMAIL`

`magic_notifier.settings.NOTIFIER_EMAIL_DEFAULT_GATEWAY`

`magic_notifier.smser`

## Module Contents

### Classes

---

*ExternalSMS*

This class is responsible of sending a notification via sms.

---

### Attributes

---

*logger*

---

`magic_notifier.smser.logger`

```
class magic_notifier.smser.ExternalSMS(receivers: list, context: dict, template: Optional[str] = None,
                                       final_message: Optional[str] = None, sms_gateway:
                                       Optional[str] = None, **kwargs)
```

This class is responsible of sending a notification via sms.

#### Parameters

- **receivers** – list of User
- **template** – the name of the template to user. Default None
- **context** – the context to be passed to template. Default None
- **final\_message** – the final message to be sent as the notification content, must be sent if template is None, template is ignored if it is sent. Default None
- **sms\_gateway** – the sms gateway to use. Default to None
- **kwargs** –

`send()`

`_send()`

`magic_notifier.tasks`

`magic_notifier.utils`

## Module Contents

## Classes

---

*NotificationBuilder*

---

## Functions

---

*import\_attribute*(→ Any)

---

*get\_user\_number*(→ Optional[str])

---

*get\_settings*(→ Any)

---

*get\_user\_from\_ws\_token*(→ User)

---

## Attributes

---

*logger*

---

*User*

---

`magic_notifier.utils.logger`

`magic_notifier.utils.User`

`class magic_notifier.utils.NotificationBuilder(subject)`

`text(text=None)`

`subject(subject=None)`

`link(link=None)`

`mode(mode=None)`

`type(type: str = None, sub_stype: str = None)`

`action(text=None, method: str = None, url: str = None, fields: dict = {})`

`actions(actions: list = None)`

`user(user: User = None)`

`data(data: dict = None)`

`image(image=None)`

`save()`

**show()**

`magic_notifier.utils.import_attribute(class_path: str) → Any`

`magic_notifier.utils.get_user_number(user: User) → Optional[str]`

`magic_notifier.utils.get_settings(name: str) → Any`

`magic_notifier.utils.get_user_from_ws_token(token: str) → User`

`magic_notifier.views`



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- `modindex`
- `search`



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