



Djagios for all!

Jochen Maes

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Who/What/Why

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Overview of  
Djagios

Django

Djagios

Demo

Code in depth!

And now the  
end is near...

Q&A

Thanks...

# Djagios for all!

Jochen Maes

November 13, 2009



# Outline

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# Who am I

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Thanks...

- System Engineer With Development affinity (devops)
- Inuits
- different projects and roles (sx,fn,FOSDEM)

To get me in your team, please contact  
[kris.kerremans@inuits.be](mailto:kris.kerremans@inuits.be)



# WTF?

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Thanks...

Djagios is a web based Nagios configuration tool written for Managers AND Developers! Providing a strong API towards nagios configuration



# Reasoning

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Thanks...

The most asked question is: "Why write Djagios if x,y or z already exist?"

- Too complicated
- Not easy to adapt/brand
- php was not welcome
- easy API



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# Djagios main goals

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Thanks...

- API API API API
- Fully working import for all supported objects
- Fully working export for all supported objects
- Complete developer documentation
- Theme able
- Easy adaptation (good framework)



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# Model

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Thanks...

- Very easy to model
- Work lies in decyphering Nagios Documentation
- Database abstraction



# Admin

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Thanks...

- Easy from models!
- Contains user/group control
- Adjustable for your needs



# Interoperability

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- Data serialization (json/yaml/python/xml)
- Full python support (!Jython!)
- Commandline script



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# Default theme

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Very basic! Keep it simple!

- List hosts
- List services for host
- Add/remove hosts
- Add/remove services from hosts



# Default theme future

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Thanks...

- Mobile
- Basic user control
- Any ideas?



# Non web related

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- Python API to models
- Import/Export
- Easy object retrieval (`object.get`)
- Documentation!!!!



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## What to expect:

- Default theme
- Admin
- Integration with Nagios
- Commandline tools



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# model!

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## Simple modelling of objects:

```
class Command(NagiosObject, models.Model):
    """Definition for the Nagios command object"""
    FILE_NAME = 'command.cfg'
    command_name = models.CharField(max_length=255,unique=True)
    command_line = models.TextField()
```

## Gives:

```
CREATE TABLE 'core_command' (
  'id' integer AUTO_INCREMENT NOT NULL PRIMARY KEY,
  'command_name' varchar(255) NOT NULL UNIQUE,
  'command_line' longtext NOT NULL
)
;
```



# model!!

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## A bit more complex

```
class ServiceDependency(NagiosObject, models.Model):
    dependent_host_name = models.ManyToManyField('Host', related_name='SD_dh_H', \
        blank=True, null=True)
    dependent_hostgroup_name = models.ManyToManyField('HostGroup', \
        related_name='SD_dhg_HG', blank=True, null=True)
    dependent_service_description = models.ForeignKey('Service', related_name='SD_ds_S')
    host_name = models.ManyToManyField('Host', related_name='SD_hn_H', \
        blank=True, null=True)
    hostgroup_name = models.ManyToManyField('HostGroup', related_name='SD_hgn_HG', \
        blank=True, null=True)
    service_description = models.ForeignKey('Service', related_name='SD_s_S', \
        blank=True, null=True)
    inherits_parent = models.NullBooleanField(default=False)
    execution_failure_criteria = models.CharField(max_length=10)
    notification_failure_criteria = models.CharField(max_length=10)
    dependency_period = models.ForeignKey('TimePeriod', related_name='SD_dp_TP', \
        blank=True, null=True)
```



# control!

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Object Manipulation is simple, example creation command:

```
c = Command()
c.command_name = 'check_http'
c.command_line = '$USER1$/check_http -I $HOSTADDRESS$ $ARG1$'
c.save()
```

Fetching object:

```
c = Command.get('check_http')
h = Host.get('Nagios Server')
```

modify object:

```
c = Command.get('check_http')
c.command_line = '$USER1$/check_http_new -I $HOSTADDRESS$ $ARG1$'
c.save()
```

remove:

```
Command.get('check_http').delete()
```



# view!

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## Add a host!

### ● form:

```
class HostForm(forms.Form):
    name = forms.CharField(label='Server Name', max_length=50)
    address = forms.CharField(label='Servers Address (dns or IP)', max_length=50)
    template = forms.ModelChoiceField(label='Template', \
        queryset=Host.objects.filter(register=False).order_by('name'))
```

### ● logic:

```
...
form = HostForm(request.POST)
if form.is_valid():
    h = Host()
    h.host_name = _sanitize_alias(form.cleaned_data['name'])
    h.alias = form.cleaned_data['name']
    h.address = form.cleaned_data['address']
    h.use = form.cleaned_data['template']
    h.save()
    return HttpResponseRedirect('/')
...
```



# template!

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The templates follow the Jinja2 structures used by Django.  
This makes extending, overriding super duper!

```
{% extends "default/index.html" %}
{% block content %}
<form method="POST" action="/host/add/">
  <table>
    {{ form }}
  </table>
  <input type='submit' value='add to nagios'>
</form>
{% endblock content %}
```



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# Q&A

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## Whot?



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# ... for listening

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The

says Thanks!



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