

Django-Caching in der Praxis

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- Phil Karlton: "There are only two hard things in Computer Science: cache invalidation and naming things"

Caching

- Caching in der App
 - volle Kontrolle
- Caching im Browser
 - Invalidierung schwierig

Caching in der App

- `@cache_page` Decorator
- `{% cache %}` Template-Fragment-Cache
- `from django.core.cache import cache`
Low-Level Cache API

@cache_page

- Equivalent mit CacheMiddleware
- Schwer einzelne Seiten zu invalidieren, da der Cache-Key ein Hash aus den Request-Headern ist.
- Invalidierung z.B. über GET-Parameter

@cache_page

```
urlpatterns = patterns("",  
    url(r'^tag/$',  
        cache_page(tagcloud, CACHE_TIMEOUT),  
        {},  
        name="blog_tagcloud"),  
)
```

```
{% cache %}
```

```
{% block content %}
```

```
{% cache 300 blogentry object.pk SITE_ID %}
```

```
{# content, tags, kommentare etc. #}
```

```
{% endcache %}
```

```
{% render_comment_form for object %}
```

```
{% endblock %}
```

Invalidierung

```
def purge_cache(sender, instance, **kwargs):  
    cache_key = u'blogentry:%s:%s' % (instance.pk,  
                                       settings.SITE_ID)  
    cache.delete(cache_key)  
  
signals.post_save.connect(purge_cache,  
                           sender=BlogEntry)
```


django.core.cache

```
@property
def title(self):
    cache_key = u"blogentry_title_%s" % self.pk
    _title = cache.get(cache_key)
    if _title is None:
        _title = rest_title(self.content)
        cache.set(cache_key, _title, TIMEOUT)
    return _title
```

Caching im Browser

- @cache_page / CacheMiddleware setzt bereits korrekte HTTP-Header
- HTTP-Header für statische Dateien
- Mit YSlow (Firebug AddOn) prüfen

Media Files

Den Webserver die Arbeit machen lassen.

```
<FilesMatch "\.(css|js)$">  
  ExpiresActive On  
  ExpiresDefault "access plus 10 years"  
  SetOutputFilter DEFLATE  
</FilesMatch>
```

Media Files

Mechanismus für die Invalidation bereitstellen

```
<link  
rel="stylesheet"  
href="{{ MEDIA_URL }}{% expire_tag "css/reset.css" %}"  
type="text/css"  
>
```

Expire-Tag

```
{% expire_tag "css/master.css" %}
```

```
css/master.1234567890.css
```

```
RewriteRule ^(.*)\.[0-9]+\.(css|js)$ /$1.$2 [L]
```

<http://www.django-hosting.de/wiki/MediaFileExpire/>

YSlow

Type	URL	Expires	Gzip	RespTime	Size (Ungzip)	ETag
doc	http://arnebrodowski.de/blog/	5/12/2009	gzip	6	8.1K (30.1K)	"ca4caf52ebb028cc56d22fdc7e852cfc"
js	http://arnebrodowski.de/site_media/js/jquery.1235313383.js	4/24/2019	gzip	219	17.0K (56.4K)	"dc5a-cf6147c0;abd28f00"
js	http://www.google-analytics.com/ga.js		gzip	249	9.1K (22.7K)	
css	http://arnebrodowski.de/site_media/css/master.1235419186.css	3/18/2019	gzip	25	3.0K (12.2K)	"3003-71baf080;abd28f00"
css	http://arnebrodowski.de/site_media/css/print.1235328997.css	3/18/2019	gzip	3	0.3K (0.6K)	"2a1-720c0340;abd28f00"
image	http://arnebrodowski.de/site_media/uploads/php2django.png			382	14.6K	"3946-57c4bd40"
image	http://public.rcs4u.de/_arne/blog/2009/sata_quickport.jpg	5/10/2019		152	16.6K	"4133-5522bfc0"
image	http://public.rcs4u.de/_arne/blog/2009/changelist_filter.jpg	5/10/2019		111	42.8K	"a752-1fafa0c0"
image	http://www.google-analytics.com/__utm.gif?...	9/17/1975		143	0.03K	

The End