



Neue Wege mit Contao 4

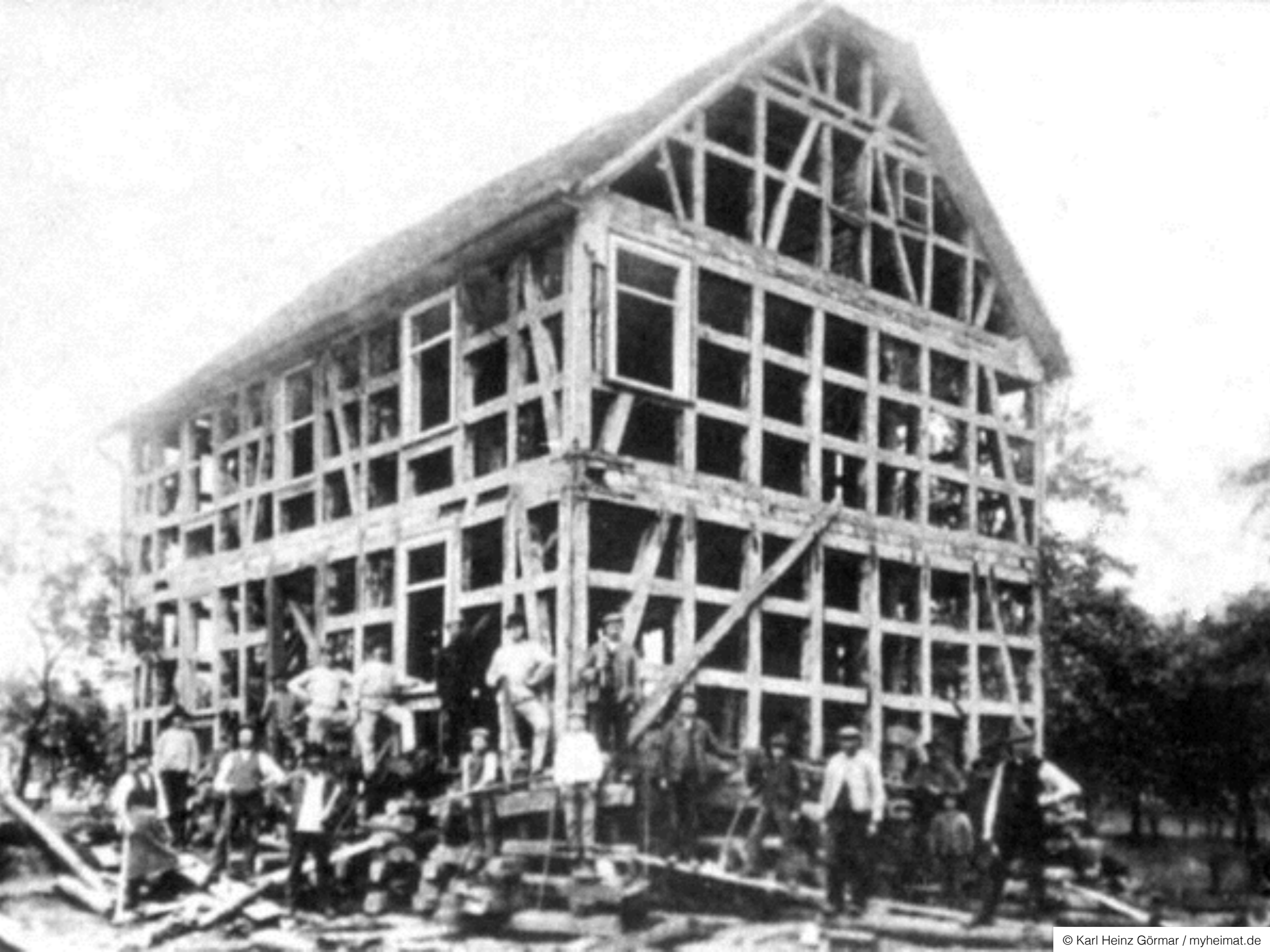
Schöne neue PHP-Welt

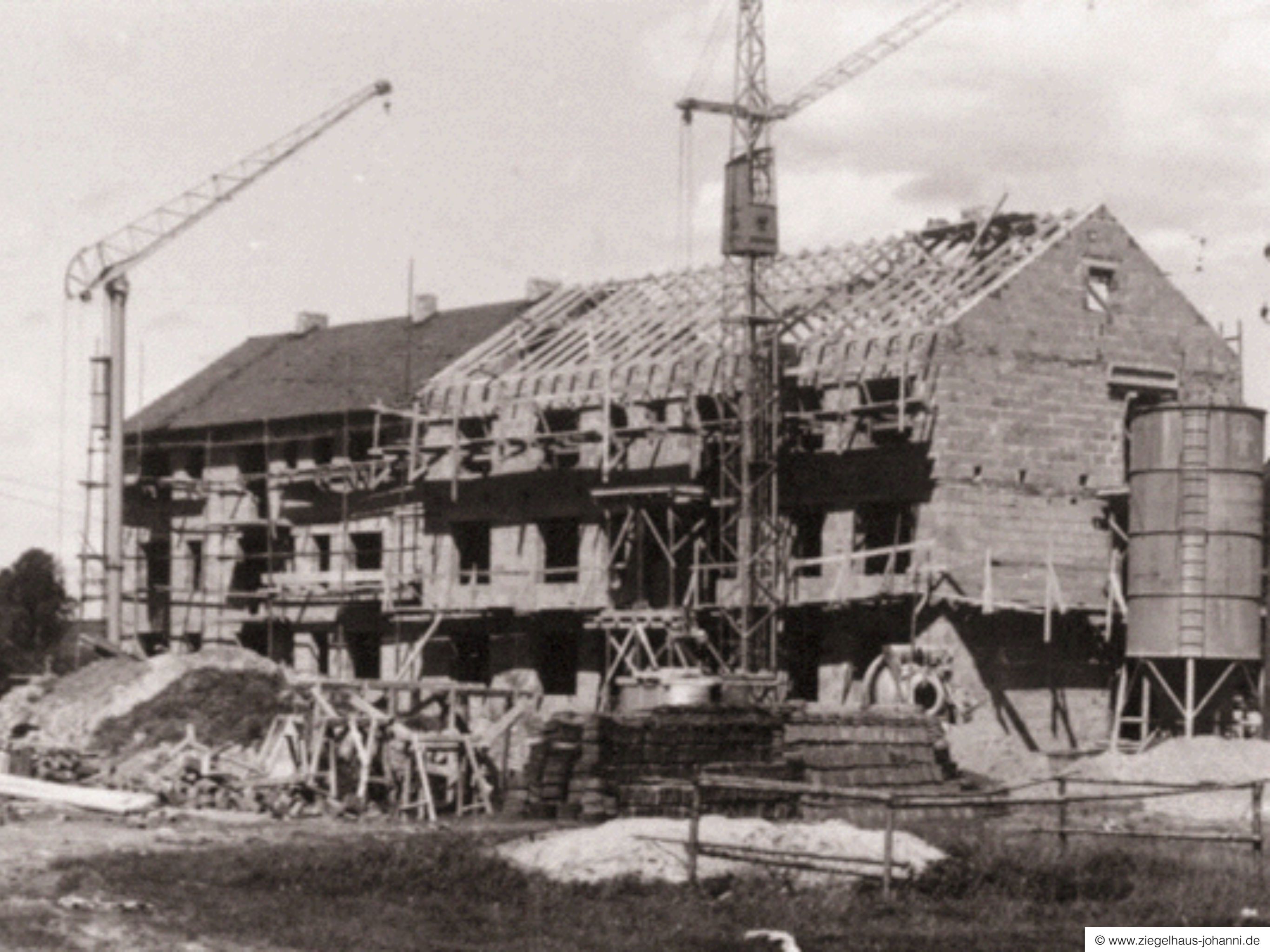


Über mich

- Andreas Schempp / terminal42 gmbh
- Schweiz
- Contao Core Entwickler
- Vorstand (Schatzmeister) Contao Association
- Hauptentwickler von Isotope eCommerce



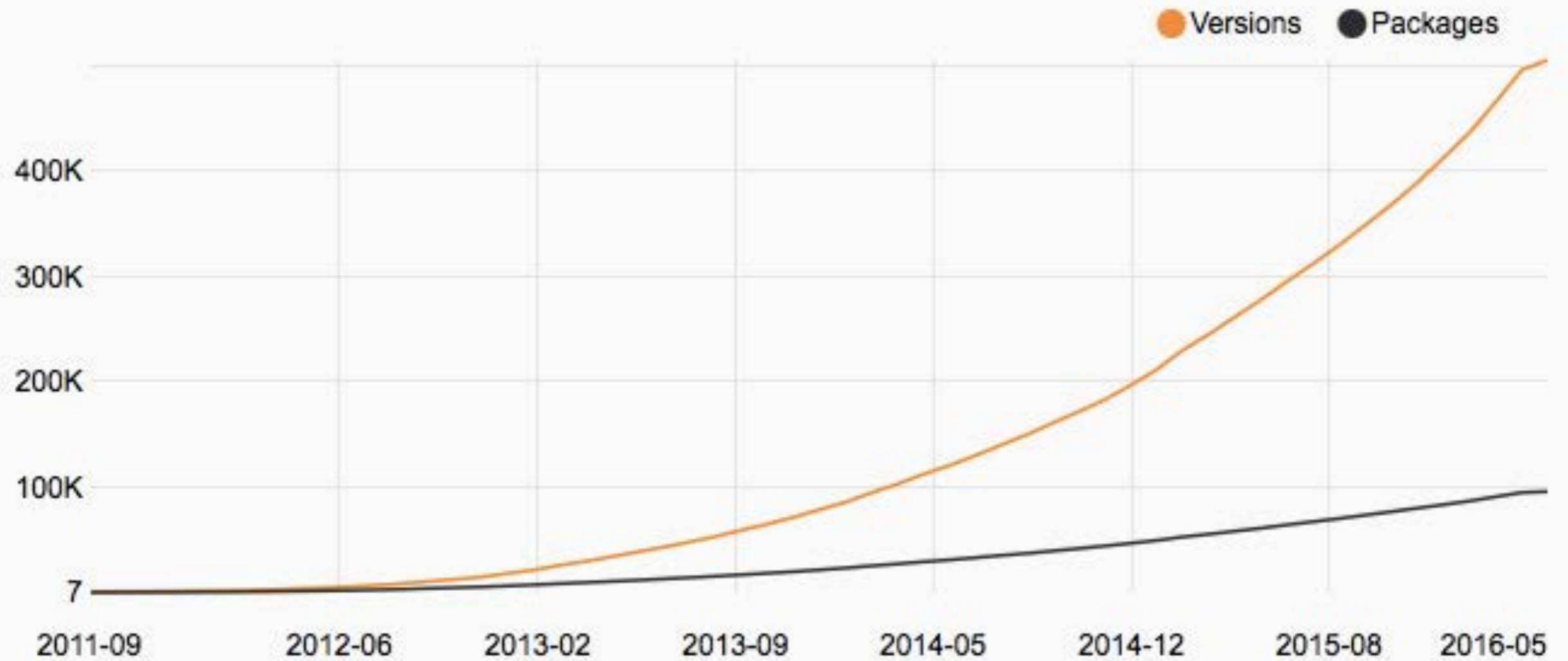








Packages/versions over time



Composer Statistik

Totals

Packages registered: 95'284

Versions available: 502'313

Packages installed: 2'019'225'476

(since 2012-04-13)

<https://packagist.org/statistics>



Contao

&



Symfony

Symfony

Verzeichnisstruktur

- app/
 - config/...
 - logs/...
 - AppKernel.php
 - console
- src/
- web/
 - app.php
 - app_dev.php
- composer.json

Symfony

Verzeichnisstruktur

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Symfony

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Symfony

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Symfony

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Symfony

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Symfony

Verzeichnisstruktur

- app/
 - config/...
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 - AppKernel.php
 - console
- src/
- web/
 - app.php
 - app_dev.php
 - **composer.json**

Contao Verzeichnisstruktur

- system/
 - config/ ...
 - modules/ ...
 - initialize.php
- templates/
- files/
- vendor/contao/ ...



Service Container

- wie `$GLOBALS`, aber Objekt-Orientiert
- Application Configuration
- Services
- Dependency Injection

Dependency Injection

- Static: `Input::get()`
- Singleton: `Database::getInstance()`
- Fetch: `System::import()` & `System::importStatic()`
- Constructor Injection: `__construct(Database $db)`
- Setter Injection: `$obj->setDatabase(Database $db)`

Service Configuration

```
1  parameters:
2     . . . . app.api_key: sgkemkipUbegxLXGd3E3
3
4  services:
5     . . . . app.api:
6         . . . . . class: AppBundle\Api
7         . . . . . arguments:
8             . . . . . - "@doctrine.dbal.connection"
9             . . . . . - "%app.api_key%"
10        . . . . . calls:
11            . . . . . - ["setFramework", ["@contao.framework"]]
12
13     . . . . app.listener.inserttags:
14         . . . . . class: AppBundle\EventListener\InsertTagsListener
15         . . . . . arguments:
16             . . . . . - "@app.api"
17
```

Contao Framework

```
10
11 namespace Contao\CoreBundle\Framework;
12
13 /** Contao framework interface. ...*/
18 ①↓ interface ContaoFrameworkInterface extends \Contao\CoreBundle\ContaoFram
19 {
20     /** Checks if the framework has been initialized. ...*/
25 ①↓ ②↑ public function isInitialized();
26
27     /** Initializes the framework. ...*/
30 ①↓ ②↑ public function initialize();
31
32     /** Creates a new instance of a given class. ...*/
40 ①↓ public function createInstance($class, $args = []);
41
42     /** Returns an adapter class for a given class. ...*/
49 ①↓ public function getAdapter($class);
50 }
51
```


NEW FEATURES...



EVERYWHERE!

Dependency Injection

```
System::import() & System::importStatic()
```

- Bisher

```
method_exists('getInstance', $class)
```

```
/* ... */
```

```
new $class();
```

Hooks

```
48  /**
49  .*Register hooks
50  .*/
51  $GLOBALS['TL_HOOKS']['replaceInsertTags'][] = array(
52  ──▶ 'contao_calendar.listener.insert_tags',
53  ──▶ 'onReplaceInsertTags'
54  );
55
```

Callback

```
24 /**
25  * Add save callback
26  */
27 $GLOBALS['TL_DCA']['tl_member']['fields']['disable']['save_callback'][] = array(
28     → 'contao_newsletter.data_container.member',
29     → 'onToggleVisibility'
30 );
31
```

Callbacks

```
1  services:
2  ...  contao_newsletter.data_container.member:
3  ...  | ...  class: Contao\NewsletterBundle\DataContainer\MemberDataContainer
4  ...  | ...  arguments:
5  ...  | ...  - "@doctrine.dbal.connection"
6
```

UrlGenerator

```
$urlGenerator = System::getContainer()  
    ->get('contao.routing.url_generator');  
  
$urlGenerator->generate(  
    'foo/{article}',  
    ['article' => 'bar', 'auto_item' => 'article']  
);
```

- => /foo/bar.html

<https://github.com/contao/core-bundle/pull/480>

UrlGenerator

```
$urlGenerator = System::getContainer()  
    ->get('contao.routing.url_generator');  
  
$urlGenerator->generate(  
    'foo/{article}',  
    ['article' => 'bar', 'example' => 'test']  
);
```

- => `/foo/article/bar.html?example=test`

<https://github.com/contao/core-bundle/pull/480>

UrlGenerator

```
$page = PageModel::findwithDetails(/* ... */);  
  
$urlGenerator->generate(  
    ($page->alias ?: $page->id) . '/{items}',  
    [  
        'items'    => 'example',  
        '_domain' => $page->domain,  
        '_ssl'     => (bool) $page->rootUseSSL  
    ],  
    UrlGeneratorInterface::ABSOLUTE_URL  
);
```


contao.cache

```
System::getContainer()->get('contao.cache')
```

- `$cache->save('vendor_bundle.foobar', 'test');`
- `$cache->fetch('vendor_bundle.foobar');`

<https://github.com/contao/core-bundle/pull/468>

PaletteManipulator

```
12 /**
13  * Extend default palette
14  */
15 \Contao\CoreBundle\DataContainer\PaletteManipulator::create()
16     ->addLegend(
17         'feed_legend',
18         'modules_legend',
19         \Contao\CoreBundle\DataContainer\PaletteManipulator::POSITION_BEFORE
20     )
21     ->addField(
22         'calendarfeeds',
23         'feed_legend',
24         \Contao\CoreBundle\DataContainer\PaletteManipulator::POSITION_APPEND
25     )
26     ->applyToPalette('tl_layout', 'default')
27 ;
```

<https://github.com/contao/core-bundle/pull/474>

Monolog => tl_log

```
$logger = System::getContainer()->get('logger');  
$logger->info(  
    'Allgemeine Meldung',  
    [  
        'contao' => new ContaoContext(  
            __METHOD__  
        )  
    ]  
);
```

<https://github.com/contao/core-bundle/pull/449>

Monolog => tl_log

```
$logger = System::getContainer()->get('logger');  
$logger->error(  
    'Fehlermeldung',  
    [  
        'contao' => new ContaoContext(  
            __METHOD__  
        )  
    ]  
);
```

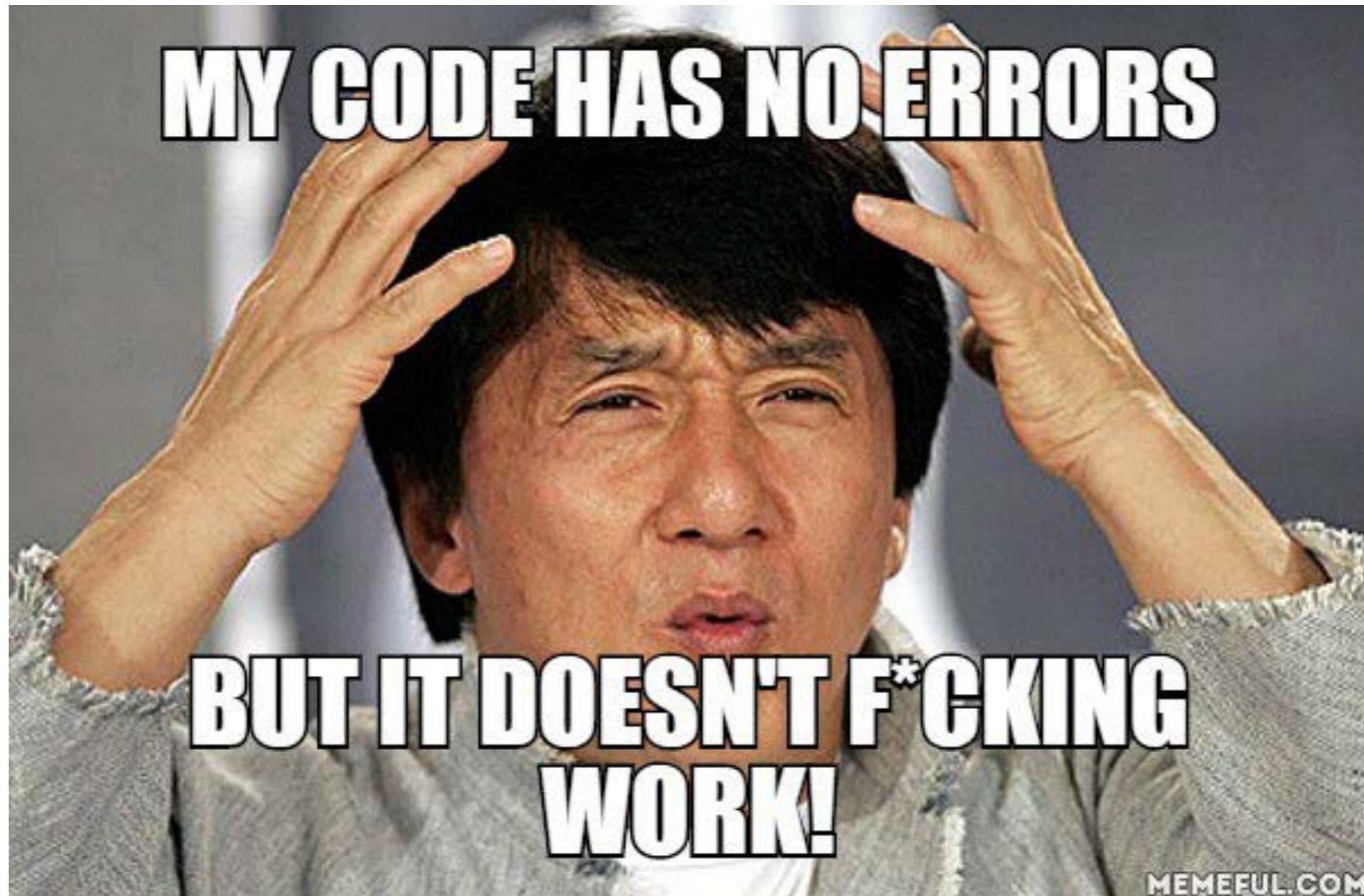
Monolog => tl_log

```
$logger = System::getContainer()->get('logger');  
$logger->debug(  
    'E-Mail sent to example@example.org',  
    [  
        'contao' => new ContaoContext(  
            __METHOD__,  
            ContaoContext::NEWSLETTER  
        )  
    ]  
);
```

Monolog => E-Mail

```
# Monolog configuration
monolog:
  handlers:
    email:
      type:          swift_mailer
      from_email:    'error@example.com'
      to_email:      'error@example.com'
      subject:       'An Error Occurred!'
      level:         'error'
```

http://symfony.com/doc/current/cookbook/logging/monolog_email.html



Web Profiler

app_dev.php

- Ersetzt Contao Debug Console
- Zusätzlicher Entry Point, immer verfügbar
- Freier Zugriff auf Localhost
- Passwortschutz auf Server



Contao
OFFICIAL DEMO

Home

Content Elements

Modules

About Contao

Highly Extendible

Contao ist highly extendible with a lot of extensions build by the great Contao Community. Go and check out the [Contao Extension Repository](#) to see more than 1500 Extensions.



Page layout	1 column (ID 15)
Template	fe_page
Frontend preview	disabled
Resources	Read the Contao docs

Summary

dev-develop

Contao version

93

Registered models

1 column (ID 15)

Page layout

Unknown insert tags

No unknown insert tags used on the page.

Unknown insert tag flags

No unknown insert tag flags used on the page.



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Page layout	1 column (ID 15)
Template	fe_page
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Queries

#▲	Time	Info
1	0.46 ms	<pre>SELECT * FROM tl_session WHERE hash='0383a8a04b- b7355544f5a726958bc953d1ce59f6'</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Explain query</p>
2	0.60 ms	<pre>SELECT * FROM tl_user WHERE id='1' LIMIT 0,1</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Explain query</p>
3	0.49 ms	<pre>SELECT * FROM tl_user_group WHERE id='' AND disable!='1' AND (start='' OR start<='1463407380') AND (stop='' OR stop>'1463407440') LIMIT 0,1</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Explain query</p>
4	0.31 ms	<pre>UPDATE tl_session SET tstamp=1463407389 WHERE hash='0383a8a04b- b7355544f5a726958bc953d1ce59f6'</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Explain query</p>

Queries

#▲	Time	Info																				
1	0.46 ms	<pre>SELECT * FROM tl_session WHERE hash='0383a8a04b- b7355544f5a726958bc953d1ce59f6'</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Explain query</p>																				
2	0.60 ms	<pre>SELECT * FROM tl_user WHERE id='1' LIMIT 0,1</pre> <p>Parameters: { }</p> <p>View formatted query View runnable query Hide query explanation</p> <table border="1"><thead><tr><th>i</th><th>select- d</th><th>ta- ble</th><th>typ e</th><th>possi- ble_keys</th><th>key</th><th>key_ len</th><th>ref</th><th>ro ws</th><th>Ext ra</th></tr></thead><tbody><tr><td>1</td><td>SIMPLE</td><td>tl_u ser</td><td>con st</td><td>PRIMARY</td><td>PRI- MARY</td><td>4</td><td>con st</td><td>1</td><td></td></tr></tbody></table>	i	select- d	ta- ble	typ e	possi- ble_keys	key	key_ len	ref	ro ws	Ext ra	1	SIMPLE	tl_u ser	con st	PRIMARY	PRI- MARY	4	con st	1	
i	select- d	ta- ble	typ e	possi- ble_keys	key	key_ len	ref	ro ws	Ext ra													
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VarDumper Component

- Ersatz für `var_dump()`
- Ersetzt `dump()` aus Contao 3
- Ausgabe im Web Profiler statt mitten in der Seite
- Standardmässig nur in `app_dev.php` !


http://symfony.com/doc/current/components/var_dumper/introduction.html

[All](#) > [Contao Official Demo](#) > [Content Elements](#)


[Contao Open Source CMS](#)

 [Content Elements](#)




 [Text elements](#)




 [Accordion](#)




 [Content slider](#)




 [Link elements](#)




 [Media elements](#)



 [File elements](#)



 [Include elements](#)



[Back to top](#) [Front end preview](#)

Content

- Articles
- News
- Events
- FAQ
- Newsletters
- Form generator
- Comments

Layout

- Themes
- Site structure
- Templates

Account manager

- Members
- Member groups
- Users
- User groups

System

- File manager
- System log

Site structure

Filter: Page type Protect page Allowed mer Do not searc Show to gue Publish page

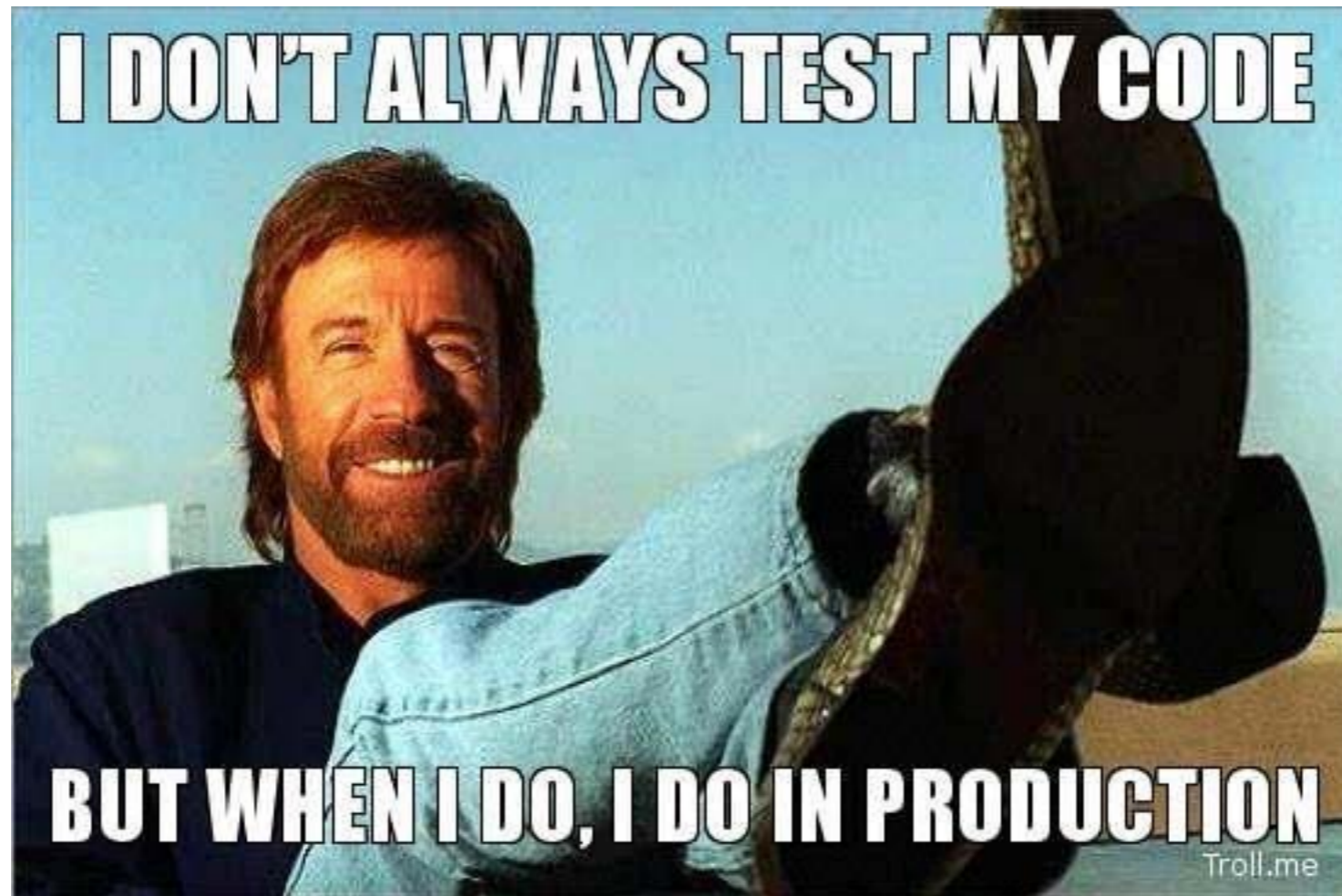
Search: Access key =

New page Toggle all Edit multiple

All > Contao Official Demo > Content Elements

Contao Open Source CMS

Content Elements	
Text elements	
Accordion	
Content slider	
Link elements	
Media elements	
File elements	
Include elements	



Unit Tests

Unit Tests in Contao 3

- Schwierig wegen Inheritance (Parent-Klassen)

```
class MyModule extends Module extends Frontend  
    extends Controller extends System
```

- Schwierig wegen statischen Methoden

```
Input::get('foobar')
```

Unit Tests in Contao 4

- Getestete Libraries nutzen dank Composer
- Services mit Dependency Injection
- Contao Framework?

Unit Tests in Contao 4

```
10
11 namespace Contao\CoreBundle\Framework;
12
13 /** Contao framework interface. ...*/
18 ①↓ interface ContaoFrameworkInterface extends \Contao\CoreBundle\ContaoFram
19 {
20     /** Checks if the framework has been initialized. ...*/
25 ①↓ ②↑ public function isInitialized();
26
27     /** Initializes the framework. ...*/
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41
42     /** Returns an adapter class for a given class. ...*/
49 ①↓ public function getAdapter($class);
50 }
51
```

ContaoFramework Adapter

```
System::getContainer()->get('contao.framework')  
$input = $f->getAdapter('Contao\Input');  
$foo = $input->get('...');
```

ContaoFramework Adapter

```
function testSomething()
{
    $container = $this->getMock(/* ... */);
    $framework = $this->getMock('ContaoFramework');
    $input      = $this->getMock('Contao\Input');

    $framework
        ->method('getAdapter')
        ->willReturn($input);

    $container->method('get')->willReturn($framework)

    System::setContainer($container);
}
```



Deployment

Deployment Prinzip

- Code-Anpassungen immer an Kopie der Installation
- ggf. mehrere Installation (Dev, Staging, Production)
- Automatisierter Upload auf Live-Server
- Automatisches ausführen benötigter Befehle

Deployment Releases

```
/var/www
|--releases
|  |--20150513120631
|--shared
|  |--app/config/parameters.yml
|  |--app/logs
|  |--files
|  |--...
|--current -> /var/www/releases/20160519120631
```

Deployment Tools

- Capistrano (Ruby)
- Fabric (Python)
- Deployer (PHP)
- Magallanes (PHP)

<http://symfony.com/doc/current/cookbook/deployment/tools.html>

Magallanes

- Mehrere Environments & Hosts
- Releases
- Konfiguration über YAML
- Eigene Tasks als PHP-Objekte

www.magephp.com

Magallanes

```
vendor/bin/mage deploy to:production
```

```
1  deployment:
2  │   user: example
3  │   from: ./
4  │   to: /home/example/public_html/production
5  │   excludes:
6  │   │   - ^app/cache
7  │   │   - ^app/config/parameters.yml
8  │   │   - ^app/logs
9  │   │   - ^assets
10 │   │   - ^files
11 │   │   - ^system/logs
12 │   │   - ^system/modules
13 │   │   - ^system/themes
14 │   │   - ^vendor
15 │   │   - ^web/install.php
16 │   │   - ^web/app_dev.php
17
18  releases:
19  │   enabled: true
20  │   max: 5
21  │   symlink: current
22  │   directory: releases
23
24  hosts:
25  │   - example.com
```

```
27  tasks:
28  ...  pre-deploy:
29  ...    - build-styles
30  ...    - build-scripts
31  ...    - unit-tests
32  ...  on-deploy:
33  ...    - filesystem/link-shared-files:
34  ...      linked_files:
35  ...        - app/config/parameters.yml: relative
36  ...      linked_folders:
37  ...        - app/logs: relative
38  ...        - files: relative
39  ...    - composer/install: {dev: false}
40  ...    - composer/generate-autoload
41  ...    - symfony2/cache-warmup: {env: prod}
42  ...    - symfony2/assets-install: {env: prod, symlink: true, relative: true}
43  ...    - contao-install
44  ...    - maintenance-lock
45  ...  post-release:
46  ...    - symfony2/doctrine-migrate: {env: prod}
47  ...    - maintenance-unlock
48
```



mage deploy to:staging

WELL THEN



LET'S GET STARTED

NASA seeks programmer fluent in 60-year-old languages to work on Voyager

By [Ryan Whitwam](#) Oct. 30, 2015 2:31 pm



After decades with the [Voyager](#) program, NASA engineer Larry Zottarelli is retiring. That means there's a job opening at the storied Jet Propulsion Laboratory, but it won't be the right fit for just any engineer. Applicants should have a can-do attitude, good communication skills, and extensive knowledge of 60-year-old programming languages.