

TYPO3 CMS 8.2 and 8.3 – What's New

Summary of the new features, changes and improvements

Created by:

Patrick Lobacher and Michael Schams

05/September/2016

Creative Commons BY-NC-SA 3.0



TYPO3 CMS 8.2 and 8.3 - What's New

Chapter Overview

Introduction

Backend User Interface

TSConfig & TypoScript

In-Depth Changes

Extbase & Fluid

Deprecated/Removed Functions

Sources and Authors

Introduction

The Facts

Introduction

TYPO3 CMS 8.2 and 8.3 – The Facts

TYPO3 CMS 8.2

- Release date: 05 July 2016
- Release type: Sprint Release
- Slogan: Upgrades

TYPO3 CMS 8.3

- Release date: 30 August 2016
- Release type: Sprint Release
- Slogan: Frontend Editing on Steroids

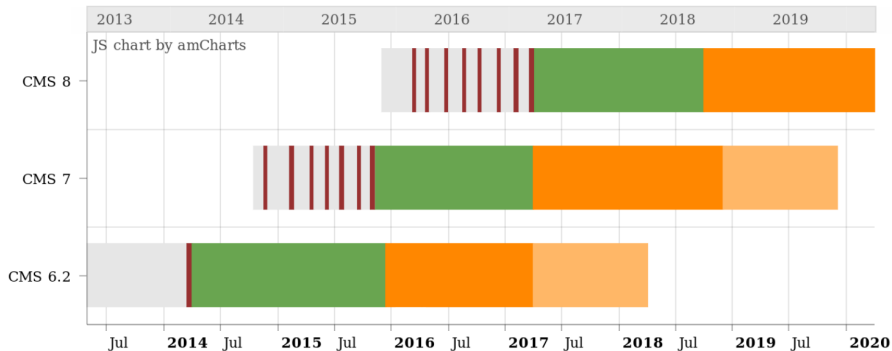
Introduction

System Requirements

- PHP: version 7
- MySQL: version 5.5 to 5.7
- Disk space: min 200 MB
- PHP settings:
 - `memory_limit` \geq 128M
 - `max_execution_time` \geq 240s
 - `max_input_vars` \geq 1500
 - compilation option `--disable-ipv6` must not be used
- The backend requires Microsoft Internet Explorer 11 or later, Microsoft Edge, Google Chrome, Firefox, Safari or any other modern, compatible browser

Introduction

Development and Release Timeline



Introduction

TYPO3 CMS Roadmap

Release dates and their primary focus:

- v8.0 22/Mar/2016 Adding last minute things
- v8.1 03/May/2016 Cloud Integration
- v8.2 05/Jul/2016 Upgrades
- v8.3 30/Aug/2016 Frontend Editing on Steroids
- v8.4 18/Oct/2016 *to be determined*
- v8.5 20/Dec/2016 Integrator Support
- v8.6 14/Feb/2017 *to be determined*
- v8.7 04/Apr/2017 LTS Preparation

<https://typo3.org/typo3-cms/roadmap/>

<https://typo3.org/news/article/kicking-off-typo3-v8-development/>

Introduction

Installation

- Official installation procedure under Linux/Mac OS X
(DocumentRoot for example `/var/www/site/htdocs`):

```
$ cd /var/www/site
$ wget --content-disposition get.typo3.org/8.3
$ tar xzf typo3_src-8.3.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-8.3.0 typo3_src
$ ln -s typo3_src/index.php
$ ln -s typo3_src/typo3
$ touch FIRST_INSTALL
```

- Symbolic links under Microsoft Windows:
 - Use `junction` under Windows XP/2000
 - Use `mklink` under Windows Vista and Windows 7

Introduction

Upgrade to TYPO3 CMS 8.x

- Upgrades only possible from TYPO3 CMS 7.6 LTS
- TYPO3 CMS < 7.6 LTS should be updated to TYPO3 CMS 7.6 LTS first
- Upgrade instructions:
http://wiki.typo3.org/Upgrade#Upgrading_to_8.3
- Official TYPO3 guide "TYPO3 Installation and Upgrading":
<http://docs.typo3.org/typo3cms/InstallationGuide>
- General approach:
 - Check minimum system requirements (PHP, MySQL, etc.)
 - Review **deprecation_*.log** in old TYPO3 instance
 - Update all extensions to the latest version
 - Deploy new sources and run Install Tool -> Upgrade Wizard
 - Review startup module for backend users (optionally)

Introduction

PHP Version 7

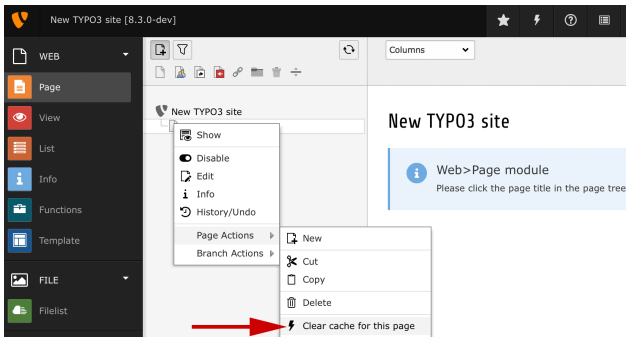
- PHP 7.0 is the minimum requirement for TYPO3 CMS 8.x
- TYPO3 will support subsequent PHP 7 releases as they come out
- This version raise gives a significant performance boost to the overall system
- Not only backend editors will notice a more fluent interface, but the new all-time record for a full cached page call in the frontend is below 7 milliseconds now, which is approximately 40% faster compared to running the very same website with PHP version 5.5
- We also started using new features from this PHP version, for instance the cryptographically secure pseudo-random generators are in active use already

Chapter 1: Backend User Interface

Backend User Interface

"Clear Cache" Entry in Context Menu

A new entry has been added to the context menu of the page tree. The item is located inside "Page Actions" and allows to clear the cache of the selected page.

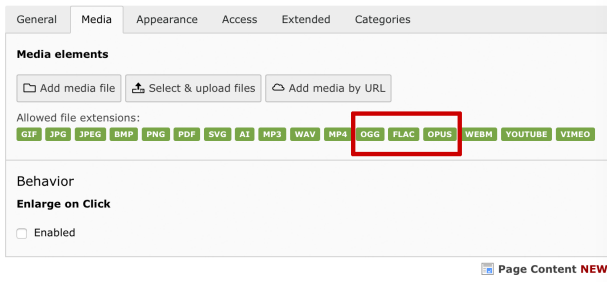


Backend User Interface

Ogg, Flac and Opus Support

Support for the following open formats has been added to the media field:
ogg, flac and opus

Create new Page Content on page "Home"



The screenshot displays the 'Media' tab of the TYPO3 Backend User Interface. The 'Media elements' section includes three buttons: 'Add media file', 'Select & upload files', and 'Add media by URL'. Below these, the 'Allowed file extensions:' section lists various file formats in green buttons: GIF, JPG, JPEG, BMP, PNG, PDF, SVG, AI, MP3, WAV, MP4, OGG, FLAC, OPUS, WEBM, YOUTUBE, and VIMEO. The OGG, FLAC, and OPUS buttons are highlighted with a red rectangular box. The 'Behavior' section shows the 'Enlarge on Click' option with an unchecked checkbox labeled 'Enabled'. At the bottom right, there is a 'Page Content NEW' indicator.

Chapter 2: TSconfig & TypoScript

TSconfig & TypoScript

Configurable Width and Height for Editpanel in EXT:feedit

- Now it is possible to change the width and height of the popup, which is used in the edit panel of EXT:feedit by using User TSconfig:

```
options.feedit.popupHeight = 700  
options.feedit.popupWidth = 900
```

Chapter 3: In-Depth Changes

In-Depth Changes

Add Linkservice for Unified Referencing Syntax (1)

- Resources within TYPO3 have been referenced using multiple, different forms of syntax in the past.
- TYPO3 now supports a modern and future-proof way of referencing resources using an extensible and expressive syntax which is easy to understand.
- The next slides explain the syntax using the following simple page link:
`t3://page?uid=13&campaignCode=ABC123`

In-Depth Changes

Add Linkservice for Unified Referencing Syntax (2)

- The syntax consists of three parts:
 - Namespace (`t3://`)

The namespace is fixed to `t3://` to ensure the "LinkService" is executed to parse the URN.
 - Resource handler key (`page`)

The resource handler key is a list of handlers available in TYPO3. At the time of writing the following handlers exist: `page`, `file` and `folder`. More keys can be configured in an associative array, where the key is the handler key and the value is a class implementing the `LinkHandlerInterface`:

```
$TYPO3_CONF_VARS['SYS']['linkHandler']
```

In-Depth Changes

Add Linkservice for Unified Referencing Syntax (3)

- ...and the 3rd part:
 - Resource parameters (?uid=13&campaignCode=ABC123)
These are the specific identification parameters that are used by any handler. Note that these may carry additional parameters in order to configure the behavior of any handler.

In-Depth Changes

`DebuggerUtility::var_dump` (1)

- The property visibility information has been added to `DebuggerUtility::var_dump()` for each object property in the dump
- If a closure is part of the debugging object, the source code of the closure is rendered, too

See example on the next slide

In-Depth Changes

DebuggerUtility::var_dump (2)

Extbase Variable Dump

```
TYPO3\CMS\Core\Database\DatabaseConnection prototype object
debugOutput => public 0 (integer)
debug_lastBuiltQuery => public '' (0 chars)
store_lastBuiltQuery => public FALSE
explainOutput => public 0 (integer)
databaseHost => protected 'localhost' (9 chars)
databasePort => protected 3306 (integer)
databaseSocket => protected '' (0 chars)
databaseName => protected 'typo383' (7 chars)
databaseUsername => protected 'root' (4 chars)
databaseUserPassword => protected 'secure7b1' (9 chars)
persistentDatabaseConnection => protected FALSE
connectionCompression => protected FALSE
connectionCharset => protected 'utf8' (4 chars)
initializeCommandsAfterConnect => protected array (empty)
isConnected => protected FALSE
link => protected NULL
default_charset => public 'utf8' (4 chars)
preProcessHookObjects => protected array (empty)
postProcessHookObjects => protected array (empty)
```

In-Depth Changes

Import Module Disabled for Non Admin Users

- The import module of `EXT:impexp` is now disabled for non-admin users by default
- For non-admin users, who need that functionality, the following User TSconfig option can be set:
`options.impexp.enableImportForNonAdminUser = 1`

Warning: this can become a security problem in TYPO3 versions 6.2 and 7.6 and should only be enabled for *trustworthy* backend users.

In-Depth Changes

Hooks and Signals (1)

- A new hook allows registering custom result browser implementations
- This approach allows to override the default implementation of `AbstractPlugin::pi_list_browserresults()` for either all extensions or only for specific ones
- The hook can be registered in `ext_localconf.php`:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']  
    [\TYPO3\CMS\Frontend\Plugin\AbstractPlugin::class]['pi_list_browserresults'][1463475262] =  
    \Vendor\ExtensionKey\Hook\ResultBrowserHook::class
```

In-Depth Changes

Hooks and Signals (2)

- With the migration to Doctrine, hook `buildQueryParameters` has been introduced in class `DatabaseRecordList`.
- This hook replaces the hook `makeQueryArray` from the deprecated method `AbstractDatabaseRecordList::makeQueryArray`.
- Using the new hook allows modifying the parameters used to query the database for records to be shown in the record list view
- The hook can be registered in `ext_localconf.php`:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']  
    [\TYPO3\CMS\Recordlist\RecordList\DatabaseRecordList::class]['buildQueryParameters'][]
```

- ...and implements the public method `buildQueryParametersPostProcess`

In-Depth Changes

Miscellaneous

- SVGs and D3 rendering
 - As part of the ExtJS removal from the TYPO3 core, the tree within the form editing has been re-worked
 - Rendering is based on SVGs and D3 now, which comes with a significant performance boost
 - Re-working the page tree the same way is planned for the near future
- Extension icons can be stored in the following directory now:
Resources/Public/Icons/<filename> (where <filename> can be: Extension.png, Extension.svg or Extension.gif)
- The new option backendFavicon in the Extension Manager configuration makes it possible to change the favicon of the backend.

Chapter 4: Extbase & Fluid

Add IconForRecordViewHelper

- A new ViewHelper to render icons for records has been added

```
<core:iconForRecord table="sys_template" row="{templateRecord}" ></core:iconForRecord>
```

```
// output:
```

```
<span class="t3js-icon icon icon-size-small icon-state-default icon-mimetypes-x-content-template" data-identifier="mimetypes-x-content-template">  
  <span class="icon-markup">  
      
  </span>  
</span>
```

Extbase & Fluid

Add Fluid Interceptor Registration (1)

- Interceptors in *Fluid Standalone* were introduced to be able to change the template output
- The Fluid API already allows for registration of custom interceptors. Now it is possible to define custom interceptors by using the following option:

```
$GLOBALS['TYPO3_CONF_VARS']['fluid']['interceptors']
```
- Interceptors registered here are added to the Fluid parser configuration

Add Fluid Interceptor Registration (2)

■ Register own interceptor to fluid parser configuration

```
$GLOBALS['TYPO3_CONF_VARS']['SYS']['fluid']['interceptors']  
    [\TYPO3\CMS\Fluid\Core\Parser\Interceptor\DebugInterceptor::class] =  
    \TYPO3\CMS\Fluid\Core\Parser\Interceptor\DebugInterceptor::class;
```

■ Class code:

```
use TYPO3Fluid\Fluid\Core\Parser\InterceptorInterface;  
use TYPO3Fluid\Fluid\Core\Parser\ParsingState;  
use TYPO3Fluid\Fluid\Core\Parser\SyntaxTree\NodeInterface;  
  
class DebugInterceptor implements InterceptorInterface  
{  
    public function process(NodeInterface $node, $interceptorPosition, ParsingState $parsingState)  
    {  
        return $node;  
    }  
  
    public function getInterceptionPoints()  
    {  
        return [];  
    }  
}
```

Chapter 4: Deprecated/Removed Functions

Deprecated/Removed Functions

Extbase Query Cache Removed

- The PHP-based query cache functionality within the Extbase persistence layer has been removed
- The following public methods within the Extbase persistence layer have been removed:
 - `Typo3DbBackend->quoteTextValueCallback()`
 - `Typo3DbBackend->injectCacheManager()`
 - Interface definition in `QuerySettingsInterface->getUseQueryCache`
- The according cache configuration has no effect anymore:
`$TYPO3_CONF_VARS[SYS][cache][cacheConfigurations][extbase_typo3dbbackend_queries]`

Deprecated/Removed Functions

Extbase: Prepared Statement Query Option

- The option to use prepared statements within the Extbase persistence has been removed
- The following methods have been removed from the `QuerySettingsInterface`, as the database abstraction layer will take care of prepared statements automatically:
 - `getUsePreparedStatement()`
 - `usePreparedStatement()`

Deprecated/Removed Functions

Miscellaneous (1)

- Two RTE-related TSconfig options, which do not allow align and class attributes when converting content from the RTE to the database, have been removed:

`RTE.default.proc.skipAlign` and `RTE.default.proc.skipClass`

- The "xcache" core cache backend has been dropped because PHP version 7 does not support xcache anymore
- The following TypoScript `stdWrap`-function has been declared **deprecated**: `removeBadHTML`

Deprecated/Removed Functions

Miscellaneous (2)

- One-line comments in TypoScript must start with two forward slashes as the first non-blank character and should be followed by a whitespace. A single slash as a comment is **deprecated** now.
- The Extbase table column cache (which was used to store all database fields of all database tables) has been removed:
`extbase_typo3dbbackend_tablecolumns`
- The associated configuration variable can be removed:
`$TYPO3_CONF_VARS[SYS][caching][cacheConfigurations]`
`[extbase_typo3dbbackend_tablecolumns]`

Chapter 5: Sources and Authors

Sources and Authors

Sources

TYPO3 News:

- <http://typo3.org/news>

Release Infos:

- http://wiki.typo3.org/TYPO3\CMS_8.2.0 and [TYPO3\CMS_8.3.0](http://wiki.typo3.org/TYPO3\CMS_8.3.0)
- [INSTALL.md](#) and [Changelog](#)
- [typo3/sysex/core/Documentation/Changelog/8.2/*](http://typo3.org/sysex/core/Documentation/Changelog/8.2/*) and [/8.3/*](http://typo3.org/sysex/core/Documentation/Changelog/8.3/*)

TYPO3 Bug-/Issuetracker:

- <https://forge.typo3.org/projects/typo3cms-core>

TYPO3 and Fluid Git Repositories:

- <https://git.typo3.org/Packages/TYPO3.CMS.git>
- <https://github.com/TYPO3Fluid/Fluid>

Sources and Authors

TYPO3 CMS What's New Team:

Pierrick Caillon, Sergio Catala, Richard Haeser, Jigal van Hemert,
Patrick Lobacher, Michel Mix, Sinisa Mitrovic,
Nena Jelena Radovic, Michael Schams and Roberto Torresani

<http://typo3.org/download/release-notes/whats-new>

Licensed under Creative Commons BY-NC-SA 3.0

