

TYP03 CMS 8.7 – What's New

Summary of the new features, changes and improvements

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TYPO3 CMS 8.7 - What's New

Chapter Overview

Introduction

TSconfig & TypoScript

In-Depth Changes

Extbase & Fluid

Deprecated/Removed Functions

Sources and Authors

Introduction

The Facts

Introduction

TYPO3 CMS 8.7 - The Facts

- Release date: 04 April 2017
- Release type: LTS Release (Long Term Release)



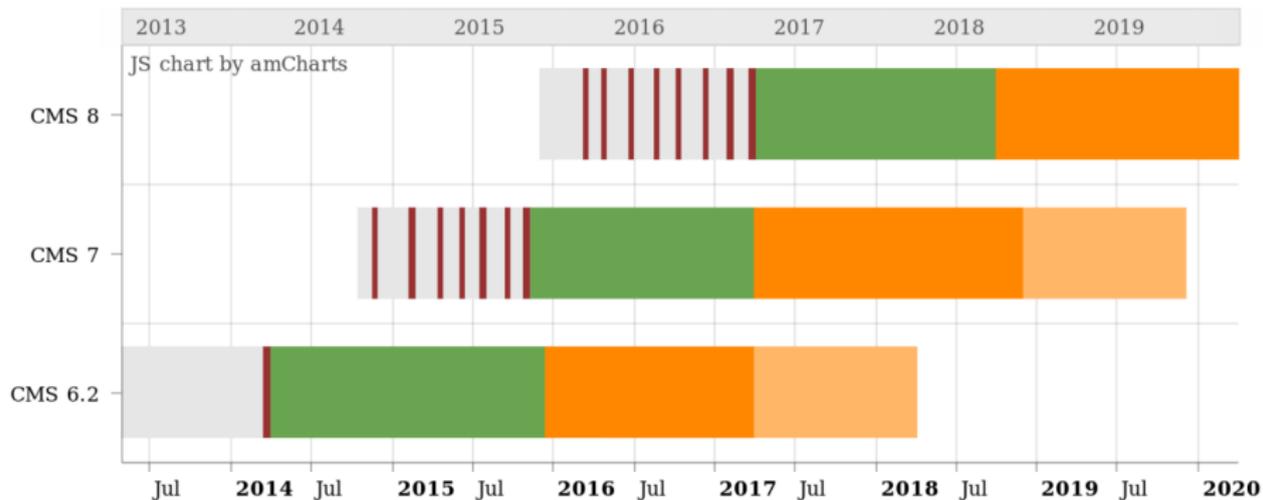
Introduction

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 Doctrine Prerequisites
- v8.3 30/Aug/2016 Rich Text Editor
- v8.4 18/Oct/2016 Doctrine Migration + Upgrades
- v8.5 20/Dec/2016 New RTE + Integrator Support
- v8.6 14/Feb/2017 Polishing
- **v8.7 04/Apr/2017 LTS Release**

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

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

Introduction

Installation

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

```
$ cd /var/www/site
$ wget --content-disposition get.typo3.org/8.7
$ tar xzf typo3_src-8.7.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-8.7.0 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_8.7
- 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: TScnfig & TypoScript

TSconfig & TypeScript

New shared content element TS library object for FSC (1/3)

- To solve an inconsistency issue for API based content element registration between CSS Styled Content (CSC) and Fluid Styled Content (FSC) through Extbase or addPIToST43 we are now introducing a new shared content object for content elements and drop the active usage of `lib.fluidContent`.
- The generated code relied on the existence of the removed `lib.stdheader` and also ignored layouts, frames, spacebefore, spaceafter in context of Fluid Styled Content.
- Generated code before change

```
tt_content.myce = COA
tt_content.myce {
    10 =< lib.stdheader
    20 =< plugin.myContent
}
```

TSconfig & TypeScript

New shared content element TS library object for FSC (2/3)

- For content element registration, the TypeScript `lib.contentElement` is now used for "CSC" and "FSC" and replaces the usage of `lib.contentElement`. The generated code was slightly adjusted to match the requirements of all content rendering definitions and can be adapted to the specific needs of a content element rendering definition anytime since a reference is used now instead of a hard definition.
- Generated code after change

```
tt_content.myce =< lib.contentElement
tt_content.myce {
    templateName = Generic
    20 =< plugin.myContent
}
```

TSconfig & TypeScript

New shared content element TS library object for FSC (3/3)

- CSS Styled Content adds the missing `lib.stdheader` and everything works as before, no migration or adjustments to your code necessary. Because COA does not understand the option `templateName` it will simply be ignored.
- Fluid Styled Content adds the logic it needs through `lib.contentElement`. All content elements registered through the TYPO3 APIs will now share a multifunctional `Generic` template. That will provide the necessary layouts and overriding options known from "FSC".

TSconfig & TypoScript

Allow overriding `cropVariants` for Image Manipulation (1/3)

- The introduction of the new crop variants (Issue 75880) broke the handling of cropped images when using TypoScript to render `file(reference)s`. This feature fixes this and introduces a new TypoScript option to use a different `cropVariant`.
- To use a different `cropVariant` as default you can provide the `cropVariant` name now in your TypoScript configuration. If `cropVariant` isn't provided the default variant will be used.

```
# Use specific cropVariant for the images  
tt_content.image.20.1.file.cropVariant = mobile
```

TScnfig & TypoScript

Allow overriding cropVariants for Image Manipulation (2/3)

- With the introduction of Issue 75880 you now can define multiple cropVariants in TCA. With this feature, it is now possible to change or override these cropVariants via TScnfig.
- Setting a FormEngine option through `TCEFORM.sys_file_reference.crop.config.cropVariants.*` does now work.

Allow overriding cropVariants for Image Manipulation (3/3)

■ Example:

```
TCEFORM.sys_file_reference.crop.config.cropVariants {
  default {
    title = Default desktop
    selectedRatio = NaN
    allowedAspectRatios {
      NaN {
        title = free
        value = 0.0
      }
    }
  }
  specialMobile {
    title = Our special mobile variant
    selectedRatio = NaN
    allowedAspectRatios {
      4:3 {
        title = ratio 4/3
        value = 1.3333333
      }
    }
  }
}
```

TSconfig & TypoScript

Frontend Login configuration now available through TypoScript constants

- The most common configuration options for the "Frontend Login" configuration is now available as TypoScript constants, and moved to a new section "Frontend Login" in the constant editor.
- For a list of all constants see: docs.typo3.org

TScnfig & TypeScript

DBAL compatible field quoting in TypeScript

- Properties in TypeScript dealing with SQL fragments need proper quoting of field names to be compatible with different database drivers. The database framework of the core now applies proper quoting to field names if they are wrapped as `{#fieldName}`
- It is advised to adapt extensions accordingly to run successfully on databases like PostgreSQL.

```
select.where = {#colPos}=0
```

Chapter 2: In-Depth Changes

In-Depth Changes

Allow overriding `PATH_site` via environment variable

- It is now possible to define the `PATH_site` constant, which acts as a basis for any entry point running a TYPO3 system, via the environment variable `TYPO3_PATH_ROOT`.
- This variable is automatically calculated and set for any TYPO3 installation set up via composer, making it possible to run the TYPO3 command line interface from any location of the system.

In-Depth Changes

Maximum field length not set as attribute `maxlength`

- If a form element is set to be using the `StringLength` server side validation through the form editor, the client side validation properties `minlength` and `maxlength` will be rendered.

```
renderables:  
-  
  type: <formElementType>  
  ...  
  properties:  
    fluidAdditionalAttributes:  
      minlength: 2  
      maxlength: 3  
      ...  
  validators:  
  -  
    identifier: StringLength  
    options:  
      minimum: 2  
      maximum: 3
```

In-Depth Changes

EXT:form - support multiple form elements per row

- Two new form element types have been added to the form framework: GridContainer and GridRow
- Using these "container" form elements will enable you to define multiple form elements per row.

```
type: Form
identifier: example-form-gridcontainer
label: 'Form Grid Container'
prototypeName: standard
renderables:
  -
    type: Page
    identifier: page-1
    label: Page
    renderables:
      -
        type: GridContainer
        identifier: gridcontainer-2
        label: 'Grid: Container'
        renderables:
          -
            type: GridRow
            identifier: gridrow-2
            label: 'Grid: Row'
            renderables:
              ...
```

In-Depth Changes

EXT:form - support multiple form elements per row

- Any Extbase Command Controller can now be accessed via the new Symfony Console CLI entrypoint by simply calling `typo3/sysext/core/bin/typo3 controller:command`.
- Using the existing CLI entrypoint via `typo3/cli_dispatch.phpsh extbase controller:command` still works as expected.

In-Depth Changes

CSS Styled Content will not reset TypoScript Constants

- Previously the TypoScript definition from CSS Styled Content resetted all constants that were set before the static template was included to preserve the namespace `styles.content`.
- Since there is no need to reset the constants, this behaviour is removed.

Chapter 3: Extbase & Fluid

Extbase & Fluid

Add generic fluid template for already rendered content (1/2)

- We introduce a new generic template to provide better support for content elements where the content itself is not processed by fluid and to make it easy to benefit from the universal layouts of fluid styled content.
- The generic template only wraps already generated html that have been assigned to the variable `content`. This eliminates the need for extensions to provide custom templates to wrap their external rendered content to achieve the same behaviour as other Fluid Styled Content elements.

Extbase & Fluid

Add generic fluid template for already rendered content (2/2)

■ Template

```
<html xmlns:f="http://typo3.org/ns/TYPO3/CMS/Fluid/ViewHelpers"
      data-namespace-typo3-fluid="true">
<f:layout name="Default" />
<f:section name="Main">
    <f:comment>This templates is used to provide necessary functionality for external
        processed content and could be used across multiple sources, for example
        the frontend login content element.</f:comment>
    {content -> f:format.raw()}
</f:section>
</html>
```

■ Fluid

```
tt_content.mycontent =< lib.contentElement
tt_content.mycontent {
    templateName = Generic
    variables {
        content = USER_INT
        content {
            userFunc = ACME\ContentExtension\Controller\SuperController->main
        }
    }
}
```

Chapter 4: Deprecated/Removed Functions

Deprecated/Removed Functions

Remove `pageOverlayFields`

- The configuration `$GLOBALS['TYPO3_CONF_VARS']['FE']['pageOverlayFields']` is removed from the default configuration as well as from the overlay handling in `PageRepository` and `RootlineUtility`.
- This setting has been used to determine overlay fields in the table `pages_language_overlay` at a time in the runtime processing when the complete TCA was not fully available.
- Since the `allowLanguageSynchronization` possibility has been integrated into TYPO3 v8 LTS, `l10n_mode` was available already and the TCA is loaded as well, the `pageOverlayFields` settings are superfluous.

Deprecated/Removed Functions

Deprecate jQuery and extJS for BE ViewHelpers

- The BE related ViewHelpers `<f:be.container>` and `<f:be.pageRenderer>` have properties to activate ExtJS and jQuery with various options. The usage of ExtJS has been deprecated and jQuery is always loaded. Therefore, the following attributes have been marked as deprecated.

■ `<f:be.container>`

- `enableClickMenu`
- `loadExtJs`
- `loadExtJsTheme`
- `enableExtJsDebug`
- `loadjQuery`
- `jQueryNamespace`

■ `<f:be.pageRenderer>`

- `loadExtJs`
- `loadExtJsTheme`
- `enableExtJsDebug`
- `loadjQuery`
- `jQueryNamespace`

Deprecated/Removed Functions

Miscellaneous (1/3)

- Method `TYP03\CMS\Backend\Utility\BackendUtility::getRecordsByField()` has been deprecated and should not be used any longer.
- The `localizationMode` for inline relational record editing types is deprecated.
- These TCA `type=inline` properties have been deprecated and superseded with the more general property `overrideChildTca`:
`foreign_types`, `foreign_selector_fieldTcaOverride`,
`foreign_record_defaults`

Deprecated/Removed Functions

Miscellaneous (2/3)

- The usage of ExtJS has been marked as deprecated. Therefore, the following methods of `ExtensionManagementUtility` have been marked as deprecated: `addExtJSModule`, `registerExtDirectComponent`
- Method `BackendUtility::getRecordRaw()` has been deprecated and should not be used any longer.
- The method `GeneralUtility::csvValues()` has been marked as deprecated. Use the new method `CsvUtility::csvValues()`

Deprecated/Removed Functions

Miscellaneous (3/3)

- The functionality to register any command line script via PHP `$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['GLOBAL']['cliKeys']['my_extension']` has been marked as deprecated. The entrypoint `typo3/cli_dispatch.phpsh` as well as the corresponding `Application` class and the `CliRequestHandler` class have been marked as deprecated as well.
- The following methods within `ContentObjectRenderer` PHP class have been marked as deprecated: `getSubpart()`, `substituteSubpartArray()`, `substituteMarker...` and `fillInMarkerArray()`

Chapter 5: Sources and Authors

Sources and Authors

Sources

TYPO3 News:

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

Release Info:

- http://wiki.typo3.org/TYPO3\CMS_8.7.0
- [INSTALL.md](#) and [Changelog](#)
- `typo3/sysexst/core/Documentation/Changelog/8.7/*`

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/TYPO3/Fluid>

Sources and Authors

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

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