

# TYPO3 CMS 7.6 – What's New

Summary of the new features, changes and improvements

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# TYPO3 CMS 7.6 - What's New

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## Chapter Overview

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## Introduction

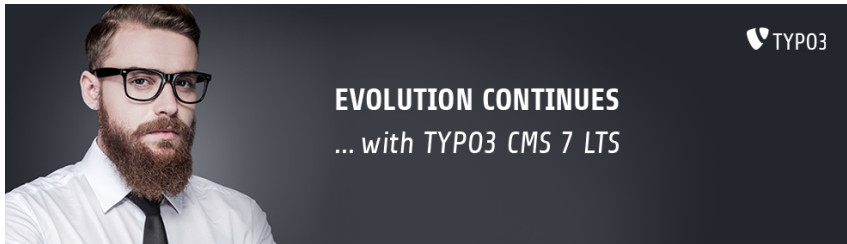
## The Facts

# Introduction

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## TYPO3 CMS 7.6 – The Facts

- Release date: 10 November 2015
- Release type: **Long Term Support (LTS) Release**
- Vision: Embrace, Innovate, Deliver



# Introduction

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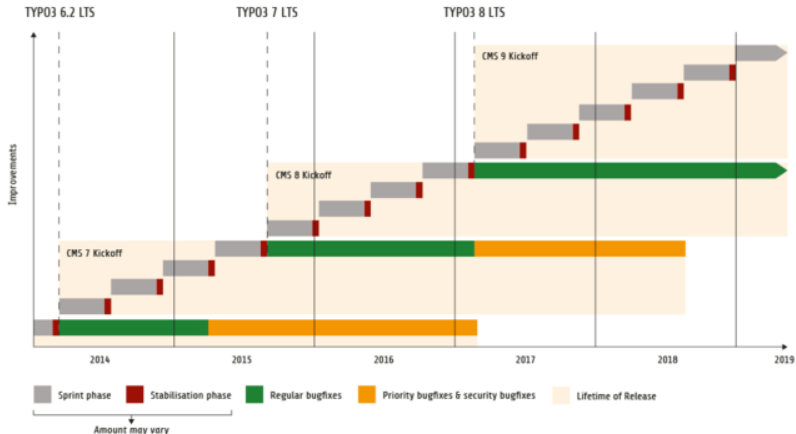
## System Requirements

- PHP\*: v5.5.0 - v5.6.x
- MySQL: v5.5.x - v5.6.x (no strict mode)
- 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
- Backend requires IE  $\geq$  9 or any other modern browser

\*) Further details: [PHP Minimum Requirements for TYPO3 CMS 7](#)

# Introduction

## Development and Release Timeline



# Introduction

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## TYPO3 CMS Roadmap

Release dates and their primary focus:

- v7.0 02/Dez/2014 Backend Overhaul Vol 1
- v7.1 24/Feb/2015 Core Cleanup & Streamlining
- v7.2 28/Apr/2015 Frontend
- v7.3 16/Jun/2015 Package Ecosystem, Composer
- v7.4 04/Aug/2015 Backend Overhaul Vol 2
- v7.5 29/Sep/2015 Finalization
- **v7 LTS 10/Nov/2015** **TYPO3 CMS 7 LTS (Long Term Support)**

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

<http://typo3.org/news/article/embrace-and-innovate-typo3-cms-7/>

# Introduction

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## 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/7.6
$ tar xzf typo3_src-7.6.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-7.6.0 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

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## Upgrade to TYPO3 CMS 7.x

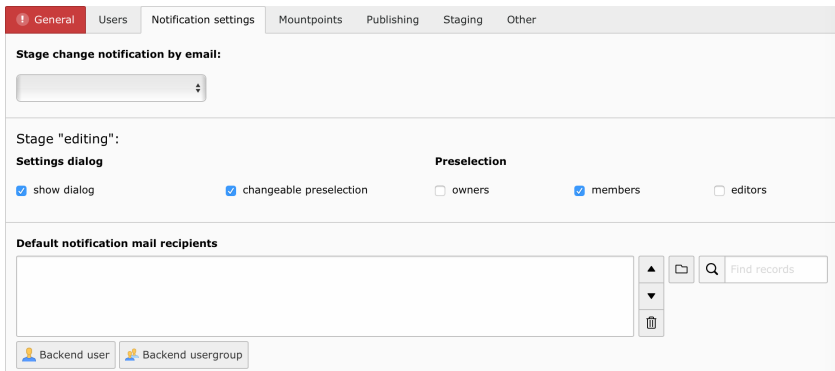
- Upgrades only possible from TYPO3 CMS 6.2 LTS
- TYPO3 CMS < 6.2 should be updated to TYPO3 CMS 6.2 LTS first
- Upgrade instructions:  
[http://wiki.typo3.org/Upgrade#Upgrading\\_to\\_7.6](http://wiki.typo3.org/Upgrade#Upgrading_to_7.6)
- Official TYPO3 guide "TYPO3 Installation and Upgrading":  
<http://docs.typo3.org/typo3cms/InstallationGuide>
- 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)

## Chapter 1: Backend User Interface

# Backend User Interface

## Workspaces Notification Settings (1)

Meaning and behavior of notification settings have been streamlined (an upgrade wizard helps to upgrade the settings to the new definitions)



The screenshot displays the 'Notification settings' configuration page in the TYPO3 backend. The interface includes a top navigation bar with tabs for 'General', 'Users', 'Notification settings', 'Mountpoints', 'Publishing', 'Staging', and 'Other'. The 'Notification settings' tab is active. Below the navigation bar, there are three main sections:

- Stage change notification by email:** A dropdown menu with a downward arrow.
- Stage "editing":** This section is divided into two columns: 'Settings dialog' and 'Preselection'.
  - Settings dialog:** Contains two checked checkboxes: 'show dialog' and 'changeable preselection'.
  - Preselection:** Contains four checkboxes: 'owners' (unchecked), 'members' (checked), and 'editors' (unchecked).
- Default notification mail recipients:** A large empty text area for listing recipients. To the right of the text area are three vertical buttons: an up arrow, a folder icon, and a trash icon. Further right is a search input field with a magnifying glass icon and the text 'Find records'.

At the bottom of the page, there are two buttons for adding recipients: 'Backend user' and 'Backend usergroup', each with a person icon.

# Backend User Interface

## Workspaces Notification Settings (2)

### Stage **publishing execute** received configuration options

Stage "publishing execute":

Settings dialog	Preselection
<input checked="" type="checkbox"/> show dialog	<input checked="" type="checkbox"/> changeable preselection
	<input checked="" type="checkbox"/> owners
	<input checked="" type="checkbox"/> members
	<input type="checkbox"/> editors

**Default notification mail recipients**

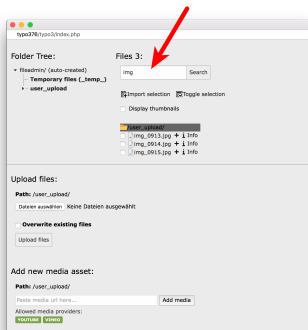
Find records

# Backend User Interface

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## Search Functionality in Element Browser

File search has been added to the TYPO3 Element Browser (works recursively)



## Chapter 2: TSconfig & TypoScript

# TScnfig & TypoScript

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## indexed\_search: Parameters

- The following TypoScript properties can now be configured for indexed\_search:

```
titleCropAfter = 50
titleCropSignifier = ...
summaryCropAfter = 180
summaryCropSignifier =
hrefInSummaryCropAfter = 60
hrefInSummaryCropSignifier = ...
markupSW_summaryMax = 300
markupSW_postPreLgd = 60
markupSW_postPreLgd_offset = 5
markupSW_divider = ...
```

- Keys can be:
  - plugin.tx\_indexedsearch.results.
  - plugin.tx\_indexedsearch.settings.results.
- Every property has stdWrap-functionality

# TSconfig & TypeScript

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## `indexed_search`: Configurable Path Separator

- New TypeScript configuration option `breadcrumbWrap` has been added
- This allows to configure page path separator in `indexed_search` results
- This option supports the TypeScript **option split** syntax. Default configuration is `"/`:

```
plugin.tx_indexedsearch.settings.breadcrumbWrap = / || /
```



# TSconfig & TypoScript

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## indexed\_search: **Configurable** no\_cache **Parameter**

- New TypoScript configuration option has been added:  
forwardSearchWordsInResultLink.no\_cache
- This controls whether the no\_cache parameter should be added to page links for indexed\_search

```
// for Indexed Search Extbase plugins
plugin.tx_indexedsearch.settings.forwardSearchWordsInResultLink.no_cache = 1

// for plugins based on AbstractPlugin
plugin.tx_indexedsearch.forwardSearchWordsInResultLink.no_cache = 1
```

## Chapter 3: In-Depth Changes

# In-Depth Changes

## Bootstrap for Install Tool (1)

- The Install Tool is now based on Bootstrap – for the installation part:

The image displays a series of overlapping screenshots from the TYPO3 CMS 7.6.0-dev installation tool, illustrating the Bootstrap-based installation process. The steps shown are:

- System environment:** Checks for prerequisites like PHP and MySQL.
- Database connection:** Allows selecting an existing database or creating a new one.
- Create user and password:** Prompts for a new user and password.
- Installation done!** Confirms the installation is complete and offers to create a pre-configured site.

Each screenshot includes a progress bar at the top, the TYPO3 logo, and navigation buttons like 'Continue', 'Back', and 'Open the backend'. The final screen includes a copyright notice: "TYPO3 CMS. Copyright © 1998-2015 Kasper S&H A/S. Extensions are copyright of their respective owners. Go to <https://typo3.org/> for details. TYPO3 comes with ABSOLUTELY NO WARRANTY; click for details. This is free software, and you are welcome to redistribute it under certain conditions; click for details. (Obstructing the appearance of this notice is prohibited by law. Donate | TYPO3.org)

# In-Depth Changes

## Bootstrap for Install Tool (2)

- The Install Tool is now based on Bootstrap – for the configuration:

Important actions

Configuration Presets

All configuration

Upgrade Wizard

System environment

Folder structure **3**

Test setup

Clean up

About

Logout from Install Tool

### Change configuration values

Changed values are written to LocalConfiguration.php. The optional file AdditionalConfiguration.php is not controlled by the TYPO3 CMS core and may override single settings again. Administrators must maintain AdditionalConfiguration.php on their own and should use it with care.

Filter by: ImageMag

#### Backend [BE]

**[BE][disable\_exec\_function] = 0**

Boolean: Don't use exec() function (except for ImageMagick which is disabled by [GFX][im]=0). If set, all fileoperations are done by the default PHP-functions. This is necessary under Windows! On Unix the system commands by exec() can be used, unless this is disabled.

#### Database [DB]

#### Extension Installation [EXT]

#### Frontend [FE]

#### Image Processing [GFX]

**[GFX][im\_path\_lzw] = /usr/bin/**

Path to the IM tool 'convert' with LZW enabled! See 'gif\_compress'. If your version 4.2.9 of ImageMagick is compiled with LZW you may leave this field blank AND disable the flag 'gif\_compress'! Tip: You can call LZW 'convert' with a prefix like 'myver\_convert' by setting this path with it, eg. '/usr/bin/myver\_' instead of just '/usr/bin/'.

/usr/bin/

**[GFX][im\_version\_51] = im6**

Write configuration

# In-Depth Changes

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## CSRF Protection for Frontend Plugins

- New class allows usage of the FormProtection API in the frontend
- This implements a CSRF protection (Cross-Site Request Forgery)

```
$formToken = \TYPO3\CMS\Core\FormProtection\FormProtectionFactory::get()->getFormProtection()->
    generateToken('news', 'edit', $uid);
if (
    $dataHasBeenSubmitted
    && \TYPO3\CMS\Core\FormProtection\FormProtectionFactory::get()->validateToken(
        \TYPO3\CMS\Core\Utility\GeneralUtility::_POST('formToken'), 'User setup', 'edit')) {
    // processes the data
}
else {
    // invalid token!
}
```

# In-Depth Changes

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## Tabs for LinkBrowser (1)

- This new feature allows to extend the LinkBrowser with new tabs
- Each tab is handled by a so called "LinkHandler", which has to implement the following Interface:  
`\TYPO3\CMS\Recordlist\LinkHandler\LinkHandlerInterface`
- LinkHandlers are registered in PageTSconfig as follows:

```
file {  
    handler = TYPO3\CMS\Recordlist\LinkHandler\FileLinkHandler  
    label = LLL:EXT:lang/locallang_browse_links.xlf:file  
    displayAfter = page  
    scanAfter = page  
    configuration {  
        customConfig = passed to the handler  
    }  
}
```

# In-Depth Changes

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## Tabs for LinkBrowser (2)

- Options `displayBefore` and `displayAfter` define the positions of the tabs
- Options `scanBefore` and `scanAfter` define the order in which handlers are executed when scanning existing links

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['LinkBrowser']['hooks'][1444048118] = [  
    'handler' => \Vendor\Ext\MyClass::class,  
    'before' => [], // optional  
    'after' => [] // optional  
];
```

# In-Depth Changes

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## Module Template API (1)

- A new Module Template API aims to normalize the implementation of DocHeaders
- Example 1: adding a button

```
$openInNewWindowButton = $this->moduleTemplate->getDocHeaderComponent()->getButtonBar()  
->makeLinkButton()  
->setHref('#')  
->setTitle($this->getLanguageService()->sL(  
    'LLL:EXT:lang/locallang_core.xlf:labels.openInNewWindow', TRUE  
))  
->setIcon($this->iconFactory->getIcon('actions-window-open', Icon::SIZE_SMALL))  
->setOnClick($aOnClick);
```

```
$this->moduleTemplate->getDocHeaderComponent()->getButtonBar()  
->addButton($openInNewWindowButton, ButtonBar::BUTTON_POSITION_RIGHT);
```



# In-Depth Changes

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## Module Template API (2)

### ■ Example 2: adding a menu with menu items

```
$languageMenu = $this->moduleTemplate->getDocHeaderComponent()  
->getModuleMenuRegistry()->makeMenu()  
->setIdentifier('_langSelector')  
->setLabel($this->getLanguageService()->sL(  
    'LLL:EXT:lang/locallang_general.xlf:LGL.language', TRUE  
));  
  
$menuItem = $languageMenu->makeMenuItem()  
->setTitle($lang['title'] . $newTranslation)  
->setHref($href);  
  
if((int)$lang['uid'] === $currentLanguage) {  
    $menuItem->setActive(TRUE);  
}  
  
$languageMenu->addMenuItem($menuItem);  
$this->moduleTemplate->getDocHeaderComponent()->getModuleMenuRegistry()->addMenu($languageMenu);
```

# In-Depth Changes

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## PSR-7 Routing for Backend AJAX Requests

- To add a route for an AJAX request, file `Configuration/Backend/AjaxRoutes.php` can be created with the following content:

```
return [  
    // do something  
    'unique_route_name' => [  
        'path' => '/toolcollection/some-action',  
        'target' => \Vendor\Controller\SomeController::class . '::myAction',  
    ]  
];
```

# In-Depth Changes

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## OpenID Hook `getUserRecord`

Two hooks have been added to the OpenID service (1/2)

- Hook 1:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['openid']['getUserRecord']
```

- Modifies the user record after it has been fetched, or:
- Create a new record if none was found
- Parameters `record`, `response` and `authInfo` are passed to the hook

# In-Depth Changes

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## OpenID Hook `authRequest`

Two hooks have been added to the OpenID service (2/2)

- Hook 2:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['openid']['authRequest']
```

- Modifies the Authentication Request, before it is sent
- Can be used to request additional attributes such as a nickname from the OpenID Server for example
- Parameters `authRequest` and `authInfo` are passed to the hook

# In-Depth Changes

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## Hooks and Signals (1)

- It is now possible to change the upload folder returned by `BackendUserAuthentication::getDefaultUploadFolder()`
- Register the hook in file `ext_localconf.php` as follows:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['t3lib/class.t3lib_userauthgroup.php']  
  ['getDefaultUploadFolder'][] =  
    '\Vendor\MyExtension\Hooks\DefaultUploadFolder::class . '-'>getDefaultUploadFolder';
```

# In-Depth Changes

---

## Hooks and Signals (2)

### Example:

```
<?php
namespace Vendor\MyExtension\Hooks;
use TYPO3\CMS\Core\Authentication\BackendUserAuthentication;
use TYPO3\CMS\Core\Resource\Folder;

/**
 * Class DefaultUploadFolder
 */
class DefaultUploadFolder {

    /**
     * Get default upload folder
     * If there is a folder present with the same name as the last part of the table name use that folder.
     * @param array $params
     * @param BackendUserAuthentication $backendUserAuthentication
     * @return Folder
     */
    public function getDefaultUploadFolder($params, BackendUserAuthentication $backendUserAuthentication)
    {
        [...]
    }
}
```

# In-Depth Changes

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## Hooks and Signals (3)

### Example (continued):

```
[...]

/** @var Folder $uploadFolder */
$uploadFolder = $params['uploadFolder'];
$pid = $params['pid'];
$table = $params['table'];
$field = $params['field'];

$matches = [];
if (!empty($uploadFolder) && preg_match('/_([a-z]+)/', $table, $matches)) {
    $folderName = $matches[1];
    if ($uploadFolder->hasFolder($folderName)) {
        $uploadFolder = $uploadFolder->getSubfolder($folderName);
    }
}
return $uploadFolder;
}
}
```

# In-Depth Changes

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## Miscellaneous

- Using the TCA field type `select` requires to specify an option `renderType`
- Valid values are:

```
'renderType' => 'selectMultipleSideBySide',  
'renderType' => 'selectCheckBox',  
'renderType' => 'selectSingle',  
'renderType' => 'selectSingleBox',  
'renderType' => 'selectTree',
```



## Chapter 4: Extbase & Fluid

# Extbase & Fluid

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## Same Table Relations

- It is now possible to use a domain model where an object is connected to another object of the same class directly

```
namespace \Vendor\Extension\Domain\Model;
class A {
    /**
     * @var \Vendor\Extension\Domain\Model\A
     */
    protected $parent;
}
```

```
namespace \Vendor\Extension\Domain\Model;
class A {
    /**
     * @var \Vendor\Extension\Domain\Model\B
     */
    protected $x;

    /**
     * @var \Vendor\Extension\Domain\Model\B
     */
    protected $y;
}
```

# Extbase & Fluid

---

## Option `absolute` for `Image-ViewHelpers`

- New option `absolute` forces `ImageViewhelper` and `Uri/ImageViewHelper` to output an **absolute** URL
- Example 1 (`ImageViewhelper`):

```
<f:image image="{file}" width="400" height="375" absolute="1" ></f:image>
```

```
// Output
```

```

```

- Example 2 (`Uri/ImageViewHelper`):

```
<f:uri.image image="{file}" width="400" height="375" absolute="1" ></f:uri>
```

```
// Output
```

```
http://example.com/fileadmin/_processed_/323223424.png
```

## Strip Whitespace between HTML Tags

- New ViewHelper `spaceless` removes redundant spaces between HTML tags while preserving the whitespace that may be inside HTML tags:

```
<f:spaceless>
<div>
    <div>
        <div>text

text</div>
</div>
</div>
```

- **Output:**

```
<div><div><div>text

text</div></div></div>
```

# Extbase & Fluid

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## RootLevel Configuration

- The RootLevel of a table can be configured in TCA now (this define where records of a table can be found in the system)
  - 0: page tree only
  - 1: on the root page only (PID 0)
  - -1: both, root page and page tree
- TCA configuration:

```
$GLOBALS['TCA']['tx_myext_domain_model_record']['ctrl']['rootLevel'] = -1;
```

## Chapter 5: Deprecated/Removed Functions

# Deprecated/Removed Functions

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## AJAX Routes

- AJAX handlers registered in the core by `ExtensionManagementUtility::registerAjaxHandler()` have been replaced by AJAX routes, which are registered under `Configuration/Backend/AjaxRoutes.php`
- Complete list (old/new) is available at: [Breaking-69916-RegisteredAJAXHandlersReplacedByRoutes.rst](#)

# Deprecated/Removed Functions

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## Miscellaneous

- Extension `mediace` has been moved to the TYPO3 Extension Repository
- TCA configuration `dynamicConfigFile` within the `ctrl` section of a table has been **deprecated**. The table configuration is located as `Configuration/TCA/<table_name>.php` now.
- The `jumpurl` function has been removed from the core and is available as an extension in TYPO3 Extension Repository



## Chapter 6: Sources and Authors

# Sources and Authors

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## Sources

### TYPO3 News:

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

### Release Infos:

- [http://wiki.typo3.org/TYPO3\CMS\\_7.6.0](http://wiki.typo3.org/TYPO3\CMS_7.6.0)
- [INSTALL.md](#) and [Changelog](#)
- `typo3/sysexst/core/Documentation/Changelog/7.6/*`

### TYPO3 Bug-/Issuetracker:

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

### TYPO3 Git Repositories:

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

# Sources and Authors

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## **TYPO3 CMS What's New Slides:**

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

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