

TYP03 Version 9.3 – What's New

Summary of the new features, changes and improvements

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TYPO3 Version 9.3 - What's New

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Introduction

The Facts

Introduction

TYPO3 Version 9.3 - The Facts

- Release date: 12 June 2018
- Release type: Sprint Release



Introduction

System Requirements

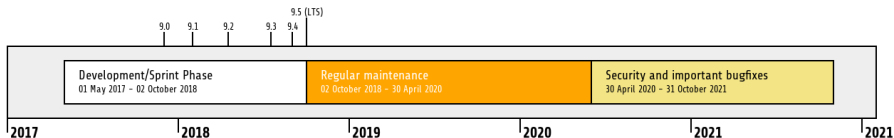
- PHP version 7.2
(will possibly be lowered to PHP 7.1 or 7.0 for future releases, decision pending)
- PHP settings:
 - `memory_limit` \geq 128M
 - `max_execution_time` \geq 240s
 - `max_input_vars` \geq 1500
 - compilation option `--disable-ipv6` must not be used
- Most database servers supported by **Doctrine DBAL** also work with TYPO3. Tested DB engines are for example:



Introduction

Development, Release and Maintenance Timeline

TYPO3 v9



Extended Support

The [TYPO3 GmbH](#) offers further support options for TYPO3 v9 LTS even after 31 October 2021 for up to two additional years.

Introduction

TYP03 v9 Roadmap

Estimated release dates and their primary focus:

- v9.0 12/Dec/2017 Install Tool and Page Tree Refactoring, Unified Page Translations
- v9.1 30/Jan/2018 Redirect Handling
- v9.2 10/Apr/2018 Site Handling
- v9.3 12/Jun/2018 **SEO and URL Routing Preparations**
- v9.4 04/Sep/2018 Frontend Editing (Feature Freeze)
- v9.5 02/Oct/2018 LTS Release

<https://typo3.org/article/typo3-v9-roadmap/>

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

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/9.3
$ tar xzf typo3_src-9.3.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-9.3.0 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 and higher

Introduction

Installation Using `composer`

- Installation using `composer` under Linux, Mac OS X and Windows 10:

```
$ cd /var/www/site/  
$ composer create-project typo3/cms-base-distribution CmsBaseDistribution ~9
```

- Alternatively, create your custom `composer.json` file and run:

```
$ composer install
```

Further details and examples for `composer.json` files are available at:

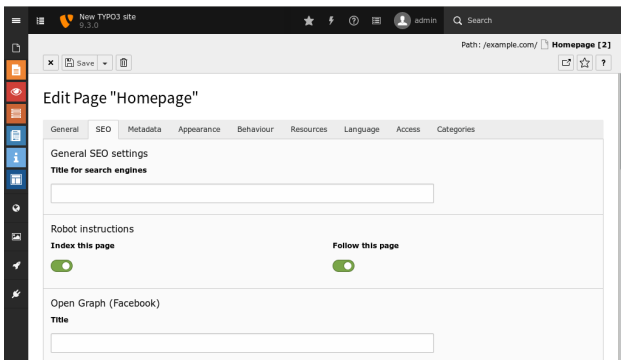
<https://composer.typo3.org>

Chapter 1: Backend User Interface

Backend User Interface

Search Engine Optimization

Page properties feature a new tab "SEO", which allows BE users to configure SEO-related information, [Open Graph](#) data and much more.




Backend User Interface

Filebrowser Search

When using the search functionality in **FILE** → **Filelist**, the meta data of files (e.g. fields "Title", "Description" and "Alternative Text") are also searched.

Search: "cute cat"

 × Search

File Path	File Name	Type	Last Modified	Size	RW	Ref
 /user_upload/images/	 cat.jpg		JPG	11-06-18	14.97 Ki	RW -

Chapter 2: Changes for Integrators

Changes for Integrators

No-cookie Domain for YouTube Videos

- YouTube videos are rendered by accessing the no-cookie domain <https://www.youtube-nocookie.com> by default
- The regular domain `www.youtube.com` can be forced by the following TypoScript configuration, if required:

```
lib.contentElement {
    settings {
        media {
            additionalConfig {
                no-cookie = 0
            }
        }
    }
}
```







Changes for Integrators

General Data Protection Regulation

- Scheduler task can be activated to anonymize IP addresses in several database tables after a certain period of time.

For example table `sys_log`, after 30 days:

Scheduled tasks

	ID	Task	Type	Frequency	Parallel Execution	Last Execution	Next Execution	  	 
<input type="checkbox"/>	1	Anonymize IP addresses in database tables (scheduler) Table: sys_log after 30 days	Recurring	0 1 * * *	No	-	11-06-18 01:00		

- The [TYPO3 GmbH Blog](#) contains further information about GDPR

Changes for Integrators

FE/BE User Accounts and Passwords

- Plain text passwords are not longer possible for BE/FE users at all
- Inactive FE/BE user records can now be removed from the database by adding scheduler task "Table garbage collection task" and enabling "Clean all available tables"
(data that does not exist, cannot be compromised in case of a security breach)

```
<?php
$tableGarbageCollectionTask = \TYPO3\CMS\Scheduler\Task\TableGarbageCollectionTask::class;
GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['scheduler']['tasks'][$tableGarbageCollectionTask]
    ['options']['tables'] = [
        'be_users' => [
            'dateField' => 'lastlogin',
            'expirePeriod' => 30
        ]
    ];
```

- See [documentation](#) for further details

Changes for Integrators

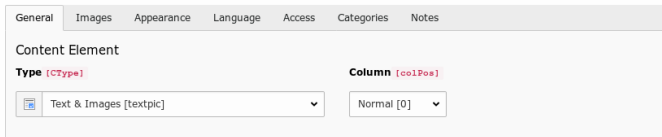
"Duplicate" Button

- Button to duplicate a content element is now hidden by default
- Visibility can be configured by user TSconfig ("1" = enabled):

```
options.showDuplicate = 1  
options.showDuplicate.[table] = 1
```



Edit Page Content "Headline" on page "Page 1"

A screenshot of the TYPO3 content editor interface. At the top, there are tabs for "General", "Images", "Appearance", "Language", "Access", "Categories", and "Notes". Below the tabs, the "Content Element" section is visible. It shows two dropdown menus: "Type [cType]" and "Column [colPos]". The "Type" dropdown is currently set to "Text & Images [textpic]" and the "Column" dropdown is set to "Normal [0]".

Changes for Integrators

EXT:form HTML5 Date Form Element

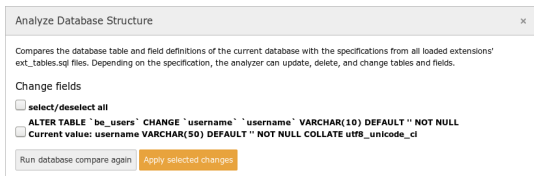
- The form framework contains a new form element "Date", including appropriate validator
- This is technically an HTML5 'type=date' attribute (see w3c.org)
- Example (including the "DateRange" validator):

```
type: Date
identifier: date-1
label: Date
defaultValue: '2018-03-02'
properties:
  displayFormat: 'd.m.Y'
  fluidAdditionalAttributes:
    min: '2018-03-01'
    max: '2018-03-30'
    step: '1'
validators:
  -
    identifier: DateRange
    options:
      minimum: '2018-03-01'
      maximum: '2018-03-30'
```

Changes for Integrators

Destructive Database Schema Changes

- If an extension is installed or updated via the Extension Manager, and *destructive* database changes are required, these changes are not applied automatically anymore
- "Destructive" changes are for example changes of existing columns, removal of a column, index or table definition, etc.
- To review and possibly execute these outstanding database updates, go to: ADMIN TOOLS → Maintenance → Analyze Database Structure



Changes for Integrators

TypoScript Conditions

New TypoScript conditions:

- Condition for the properties of a site object

```
[site = identifier = someIdentifier, base = https://example.com/]
  page.30.value = foo
[global]
```

- Condition for the site language

```
[siteLanguage = locale = de_CH.UTF-8, title = Switzerland]
  page.40.value = bar
[global]
```

Changes for Integrators

HMENU `cObj` and language IDs

- HMENU content object now supports the auto filling of language IDs for language menus

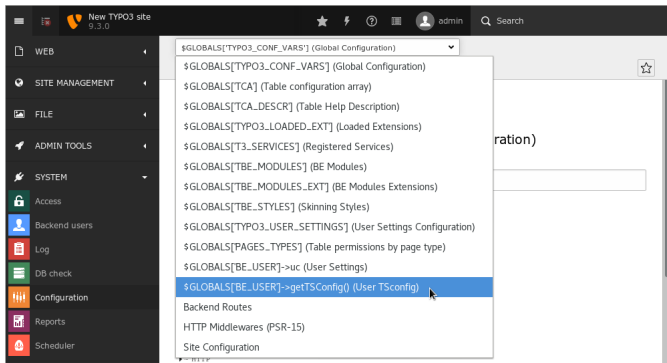
```
10 = HMENU
10 {
    special = language
    special.value = auto
}
```

- `special.value` list of comma separated language IDs (e.g. 0,1,2) or auto to load the list from site languages

Changes for Integrators

View User TScnfig Data

User TScnfig data of the currently logged-in user can be accessed at **System -> Configuration**



Changes for Integrators

Miscellaneous

- TYPO3 takes the image orientation stored as EXIF data into account, when reading dimensions and processing the image (e.g. scaling/cropping)
- SEO-related meta tags set in the page properties are now rendered in frontend by default
- The *exclude* property is set for the following fields:
 - `tt_content.file_collections`
 - `tt_content.filelink_size`
 - `tt_content.filelink_sorting`
 - `tt_content.filelink_sorting_direction`

Access permissions must be adjusted, if editors should be able to edit these fields!

Chapter 3: Changes for Developers

Changes for Developers

"Management" Database Columns

- Database schema analyzer automatically creates TYPO3 "management" columns by reading the TCA
- Developers do not need to state these fields in file `ext_tables.sql`
- Management fields are for example:
`uid, pid, crdate, cruser, hidden, deleted, sortby, etc.`
- Field definitions in `ext_tables.sql` take precedence over automatically generated fields, which means they can be customized if required

Changes for Developers

Meta Tag Manager (1)

- New MetaTagManager API has been introduced to manage and render meta tags in a flexible, but regulated way
- TYPO3 core ships an **Open Graph** MetaTagManager for example

```
use \TYPO3\CMS\Core\MetaTag\MetaTagManagerRegistry;  
$metaTagManager = MetaTagManagerRegistry::getInstance()->getManagerForProperty('og:title');  
$metaTagManager->addProperty('og:title', 'This is the OG title from a controller');
```

- Example functions available:
 - `$metaTagManager->addProperty()`
 - `$metaTagManager->removeProperty()`
 - `$metaTagManager->removeAllProperties()`

Changes for Developers

Meta Tag Manager (2)

- Developers can register custom MetaTagManager in the MetaTagManagerRegistry

```
use \TYPO3\CMS\Core\MetaTag\MetaTagManagerRegistry;
$metaTagManagerRegistry = MetaTagManagerRegistry::getInstance();
$metaTagManagerRegistry->registerManager(
    'custom',
    \Some\CustomExtension\MetaTag\CustomMetaTagManager::class
);
```

- Meta tags can be set by TypoScript and PHP

```
page.meta {
    og:site_name = TYPO3
    og:site_name.attribute = property
    og:site_name.replace = 1
}
```

("replace = 1" replaces earlier set meta tags)

Changes for Developers

Doctrine: Negative DateInterval Fields

- Database abstraction layer "Doctrine" has been updated to version 2.7.1
- Format of `DateInterval` fields can now be negative, which means, they must begin with either "+" or "-"
- Migration: Assuming, negative `DateIntervals` have not been used yet, simply prefix the data with "+"

BREAKING CHANGE!

Changes for Developers

Validate Annotation as Class Name

- Doctrine annotation `TYPO3\CMS\Extbase\Annotation\Validate` has been introduced
- This is the successor to the `validate` annotation
- Example:

```
/**
 * @TYPO3\CMS\Extbase\Annotation\Validate
 * @var Foo
 */
public $property;
```

- The `use`-statement can also be used:

```
use TYPO3\CMS\Extbase\Annotation\Validate;

/**
 * @Validate
 * @var Foo
 */
public $property;
```

Changes for Developers

Backend ViewHelpers

- Module Link ViewHelper supports two new arguments
TYPO3\CMS\Backend\ViewHelpers\ModuleLinkViewHelper
 - query: allow defining query parameters also as string
 - currentUrlParameterName: argument uses current URL

This change encourages developers to migrate existing custom backend route ViewHelpers to this ViewHelper.

- New ViewHelpers for the backend to simplify create/edit records:

```
<be:uri.newRecord pid=" ... " table=" ... " />  
<be:link.newRecord pid=" ... " table=" ... " />  
<be:uri.editRecord uid=" ... " table=" ... " />  
<be:link.editRecord uid=" ... " table=" ... " />
```

Changes for Developers

LanguageMenu Processor (1)

- New LanguageMenuProcessor for Fluid has been introduced

```
10 = TYPO3\CMS\Frontend\DataProcessing\LanguageMenuProcessor
10 {
    languages = auto
    as = languageNavigation
}
```

- Options:
 - if: TypoScript if condition
 - languages: list of comma separated language IDs (e.g. 0,1,2) "auto" to load from site languages
 - as: Variable to be used within the result

Changes for Developers

LanguageMenu Processor (2)

■ Example Fluid-Template:

```
<f:if condition="{languageNavigation}">
  <ul id="language" class="language-menu">
    <f:for each="{languageNavigation}" as="item">
      <li class="{f:if(condition: item.active, then: 'active')}{f:if(condition: item.available,
        else: ' text-muted')}">
        <f:if condition="{item.available}">
          <f:then>
            <a href="{item.link}" hreflang="{item.hreflang}" title="{item.navigationTitle}">
              <span>{item.navigationTitle}</span>
            </a>
          </f:then>
          <f:else>
            <span>{item.navigationTitle}</span>
          </f:else>
        </f:if>
      </li>
    </f:for>
  </ul>
</f:if>
```


Changes for Developers

Miscellaneous

- All enumeration classes in TYPO3 have been marked as "final" and 3rd party classes extending enumerations triggers a fatal PHP error
- Additional query restrictions can be added to:
`$GLOBALS['TYPO3_CONF_VARS']['DB']['additionalQueryRestrictions']`
These restriction objects will be added to any select query executed using the QueryBuilder (use with caution!)

Chapter 4: Deprecated/Removed Functions

Deprecated/Removed Functions

User Passwords

- Scheduler task "Convert user passwords to salted hashes" has been **removed**

(search for values starting with "\$" in database tables `be_users` and `fe_users` to find user records, which are still in plain text or MD5 hash)

- The following function has been marked **deprecated**:

`TYPO3\CMS\saltedpasswords\Utility\SaltedPasswordsUtility::isUsageEnabled()`

Deprecated/Removed Functions

Extension EXT:lang Removed

- Unused files are removed from extension EXT:lang
- References to translation in EXT:lang will return empty values
- Language files are moved to their respective extension:

```
locallang_alt_intro.xlf => about/Resources/Private/Language/Modules/locallang_alt_intro.xlf
locallang_alt_doc.xlf => backend/Resources/Private/Language/locallang_alt_doc.xlf
locallang_login.xlf => backend/Resources/Private/Language/locallang_login.xlf
locallang_common.xlf => core/Resources/Private/Language/locallang_common.xlf
locallang_core.xlf => core/Resources/Private/Language/locallang_core.xlf
locallang_general.xlf => core/Resources/Private/Language/locallang_general.xlf
locallang_misc.xlf => core/Resources/Private/Language/locallang_misc.xlf
locallang_mod_web_list.xlf => core/Resources/Private/Language/locallang_mod_web_list.xlf
locallang_tca.xlf => core/Resources/Private/Language/locallang_tca.xlf
locallang_tsfe.xlf => core/Resources/Private/Language/locallang_tsfe.xlf
locallang_wizards.xlf => core/Resources/Private/Language/locallang_wizards.xlf
locallang_browse_links.xlf => recordlist/Resources/Private/Language/locallang_browse_links.xlf
locallang_tcemain.xlf => workspaces/Resources/Private/Language/locallang_tcemain.xlf
```

Deprecated/Removed Functions

TSGlobal Related Methods

- User TSGlobal related methods have been marked **deprecated**:

```
TYPO3\CMS\core\Authentication\BackendUserAuthentication->getTSGlobalVal()  
TYPO3\CMS\core\Authentication\BackendUserAuthentication->getTSGlobalProp()
```

- Changed method signatures (no argument allowed anymore):

```
TYPO3\CMS\core\Authentication\BackendUserAuthentication->getTSGlobal()
```

- Page TSGlobal related methods have been marked **deprecated**:

```
TYPO3\CMS\backend\Utility\BackendUtility::getModTSGlobal()  
TYPO3\CMS\backend\Utility\BackendUtility::unsetMenuItems()  
TYPO3\CMS\backend\Tree\View\PagePositionMap->getModConfig()  
TYPO3\CMS\core\DataHandling\DataHandler->getTSGlobal_TSGlobal()
```

- Properties set to protected and trigger a **deprecation error** on access:

```
TYPO3\CMS\backend\Tree\View\PagePositionMap->getModConfigCache  
TYPO3\CMS\backend\Tree\View\PagePositionMap->modConfigStr
```

Deprecated/Removed Functions

Overriding Page TSConfig

- User TSConfig paths that start with "mod." trigger a PHP E_USER_DEPRECATED error and will stop working in TYPO3 v10
- Make sure to prefix the user TSConfig path with "page." in case a page TSConfig path should be overwritten on user TSConfig level:

```
// before
mod.web_list.disableSingleTableView = 1

// after
page.mod.web_list.disableSingleTableView = 1
```

Deprecated/Removed Functions

URL Handlers

- The URL handler concept introduced in TYPO3 v7 to allow pages to do redirects has been **deprecated** in favor of using PSR-7/PSR-15 middlewares
- Calling the following functions triggers a PHP E_USER_DEPRECATED error:
 - `$TSFE->initializeRedirectUrlHandlers()`
 - `$TSFE->redirectToExternalUrl()`

Deprecated/Removed Functions

Miscellaneous

- TypoScript files with ".txt" file extension have been renamed to ".typoscript" and ".tsconfig"
- Installations including core TS files using the old file extension will trigger a PHP E_USER_DEPRECATED error
- Non-namespaced classes such as "Tx_Extension_Controller_FooController" are no longer supported and will not work anymore
- The following two methods are **deprecated**:
 - BackendUtility::getModuleUrl()
 - UriBuilder->buildUriFromModule()

Deprecated/Removed Functions

More functions
have been marked deprecated or removed
in TYPO3 version 9.3.

Please see the [TYPO3 documentation](#) for further details.

Chapter 5: Miscellaneous

Miscellaneous

Argon2 Password Hashing Algorithm

- System extension EXT:saltedpasswords now supports the [PHP Password Hashing API](#), which introduces the Argon2 hashing algorithm
- Integrators can choose between several password hashing methods for FE and BE user passwords

Hashing method for the frontend
basic.FE.saltedPWHashingMethod

PBKDF2 key derivation (advanced) ▾

Defines salted hashing method to use. Choose "Portable PHP password hashing" to stay compatible with other CMS (e.g. Drupal, Wordpress). Choose "MD5 salted hashing" to reuse TYPO3 passwords for OS level authentication (other servers could use TYPO3 passwords). Choose "Blowfish salted hashing" for advanced security to reuse passwords on OS level (Blowfish might not be supported on your system TODO).

Hashing method for the backend
basic.BE.saltedPWHashingMethod

PBKDF2 key derivation (advanced) ▾

- MD5 salted hashing (secure)
- Blowfish salted hashing (advanced)
- Portable PHP password hashing (phpass)
- PBKDF2 key derivation (advanced)
- Bcrypt password hashing (PHP native)
- Argon2 password hashing (PHP native)

Miscellaneous

Install Tool Password Fields

- Install Tool now supports password fields to prevent sensitive information to be shown

For example field Mail/transport_smtp_password:

[MAIL][transport_smtp_username]

only with transport=smtp: If your SMTP server requires authentication, enter your username here.

[MAIL][transport_smtp_password]

only with transport=smtp: If your SMTP server requires authentication, enter your password here.



Chapter 6: Sources and Authors

Sources and Authors

Sources

TYPO3 News:

- <https://typo3.org/project/news/>

Release Infos:

- https://get.typo3.org/release-notes/9.x/TYPO3\CMS_9.3.0
- [INSTALL.md](#) and [Changelog](#)
- `typo3/sysexst/core/Documentation/Changelog/9.3/*`

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/TYPO3/Fluid>

Sources and Authors

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<https://typo3.org/help/documentation/whats-new/>

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