TYPO3 Version 9.2 – What's New

Summary of the new features, changes and improvements

TYPO3

TYPO3 Version 9.2 – What's New

Chapter Overview

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Introduction

The Facts

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Introduction

TYPO3 Version 9.2 – The Facts

- Release date: 10 April 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 >= 128M
  - max_execution_time >= 240s
  - max_input_vars >= 1500
  - compilation option --disable-ipv6 must <u>not</u> be used
- Most database servers supported by **Doctrine DBAL** also work with TYPO3. Tested DB engines are for example:
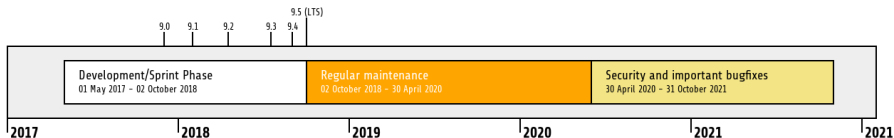
Introduction

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

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   URL Routing for Pages
- v9.4   04/Sep/2018   Frontend Editing (Feature Freeze)
- v9.5   02/Oct/2018   LTS Release

https://typo3.org/news/article/typo3-v9-roadmap/
https://typo3.org/typo3-cms/roadmap/

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Introduction

- 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/9.2
$ tar xzf typo3_src-9.2.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-9.2.0 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

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Introduction

- Installation using *composer* under Linux/Mac OS X:

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

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

  ```
  $ composer install
  ```

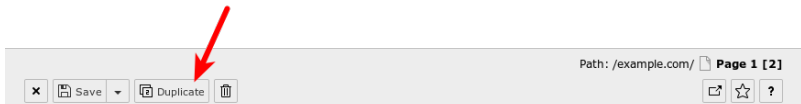 Further details and examples for `composer.json` files are available at:
  https://composer.typo3.org

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Chapter 1:

Backend User Interface

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Backend User Interface
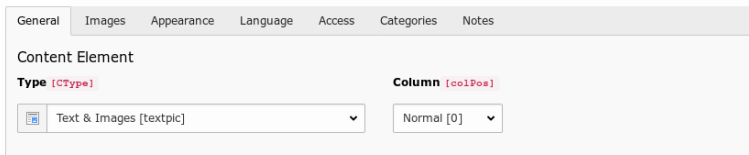
Duplicate Content Element

Backend users (e.g. editors) can easily clone ("duplicate") a content element by a click of a button.

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Backend User Interface

Show Value of Fields

In debug mode ($GLOBALS['TYPO3_CONF_VARS']['BE']['debug']),
values of fields are displayed in square brackets. These are the *real* values
that are written into the database (BE administrator users only).

Edit Page Content on page "test"

Backend User Interface

New scheduler task group can be created while editing or creating a task.
No need to switch to the list module anymore.

Scheduled tasks

Add task

Disable
☐

Class
Update extension list ⌄

Type
Recurring ⌄

Task group
⌄ +

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Backend User Interface

Checkbox Toggle Switches

Checkbox toggle switches allow BE users to switch between states easily
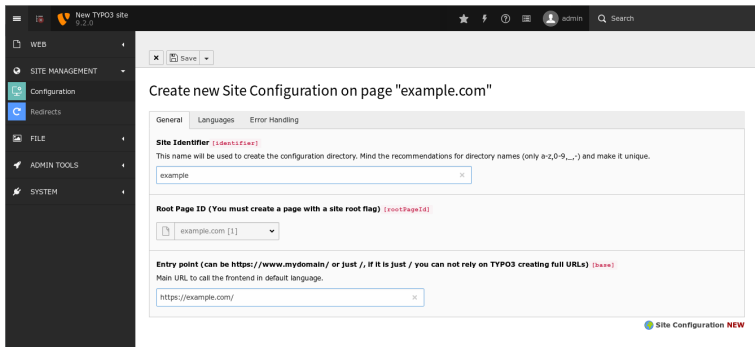
single checkbox with toggle

　○ foo

single checkbox with toggle inverted state display

　○ foo

multiple toggles checkbox

　○ foo
　○ bar
　○ baz
　○ husel

single checkbox with labeled toggle

Disabled foo

single checkbox with multiple labeled toggles

Off foo
On bar
On inv

single checkbox with labeled toggle inverted state display

Enabled foo

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Chapter 2:

Changes for Integrators

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Changes for Integrators

Site Handling (1)

- New **Site Handling** concept has been introduced in TYPO3 version 9.2
- Backend module: Site Management → Configuration

Changes for Integrators

Site Handling (2)

- Configuration file holds all settings for a given site and is to be located under `typo3conf/sites/<identifier>/config.yaml`
- `<identifier>` may consist of:
    - upper/lower case letters (A-Z and a-z)
    - dash (-)
    - underscore (_)
    - dot (.)
- Directory `typo3conf/sites/<identifier>/` can be used for further site-related files in the future, e.g. Fluid templates, BE layouts, etc.
- Some TypoScript settings will be set based on content of `config.yaml` automatically

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Changes for Integrators

Mail Queue (1)

- Emails generated by TYPO3 are sent out immediately by default
- TYPO3 v9.2 now supports SwiftMailer's spool functionality, where message are saved in a queue first and processed later
- Option 1: spool mails in memory
  (emails are only sent, if request got executed without any exceptions or errors)

  ```
  $GLOBALS['TYPO3_CONF_VARS']['MAIL']['transport_spool_type'] = 'memory';
  ```

- Option 2: spool mails in files

  ```
  $GLOBALS['TYPO3_CONF_VARS']['MAIL']['transport_spool_type'] = 'file';
  $GLOBALS['TYPO3_CONF_VARS']['MAIL']['transport_spool_filepath'] = '/folder/of/choice';
  ```

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Changes for Integrators

- The following console command can be used to process the queue and send out spooled emails

Process all spooled emails:

```
$ ./typo3/sysext/core/bin/typo3 swiftmailer:spool:send
```

Process not more than 10 spooled emails:

```
$ ./typo3/sysext/core/bin/typo3 swiftmailer:spool:send --message-limit=10
```

Process spooled emails, but not more than 10 seconds:

```
$ ./typo3/sysext/core/bin/typo3 swiftmailer:spool:send --time-limit=10
```

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Changes for Integrators

Admin Panel Re-Factoring

- Admin Panel will receive a major overhaul to be state-of-the-art again
- As the first step, it was moved into a dedicated system extension
  (this allows integrators to activate and deactivate the feature as required)
- New API provides more flexible options to add custom modules to the admin panel or to replace and existing modules
  (see next chapter for details for developers)

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Changes for Integrators

- It is now possible to generate progressive images
- This feature needs to be configured in the Install Tool:
  `$GLOBALS['TYPO3_CONF_VARS']['GFX']['processor_interlace']`
- Possible values are:
  - `None`
  - `Line`
  - `Plane`
  - `Partition`

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Changes for Integrators

Restricted Columns

- Restricted columns can be hidden in the page module, which means, users only see the columns they are allowed to edit or add content to
- The following setting in UserTS controls the behaviour:
  `mod.web_layout.hideRestrictedCols = 1`
- Note: When using backend layouts to provide an abstract view of the frontend, hiding the columns with this setting may break your layout!

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Changes for Integrators

Environment Variable `TYPO3_PATH_APP`

- Environment variable `TYPO3_PATH_APP` allows to store temporary files outside the document root
- Typically located under `typo3temp/var/`, temporary files are for example Install Tool session files, caching framework files, files related to locking or logging, Extension Manager data files or files generated by TYPO3's import/export or core update functions
- Example configuration for the Apache web server:
  `SetEnv TYPO3_PATH_APP /var/www/example.com/`
  Directory structure:
  `/var/www/example.com/htdocs/`
  `/var/www/example.com/var/`

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Changes for Integrators

Miscellaneous

- New form element property `validationErrorMessages` allows for the definition of custom validation error messages in Form Editor
- Session data can be used in TypoScript conditions:
  `[globalVar = session:foo|bar = 1234567]`
  (formerly public property `sesData` is not longer available)
- `EXT:sys_note` records can be rendered either in the top or bottom of the page and list module by defining the position in the record itself

Chapter 3:

Changes for Developers

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Changes for Developers

- TYPO3 aims to support PSR-15 standard out-of-the box
- This will improve interoperability with independent libraries and all requests in the TYPO3 core will return a PSR-7 response
- The PSR-15 standard is defined as follows:
  [PSR-15] describes common interfaces for HTTP server request handlers (request handlers) and HTTP server middleware components (middleware) that use HTTP messages [...]. HTTP request handlers are a fundamental part of any web application. Server side code receives a request message, processes it, and produces a response message. HTTP middleware is a way to move common request and response processing away from the application layer."
  See https://www.php-fig.org/psr/psr-15/ for further details.

Changes for Developers

- To add a middleware to the "*frontend*" or "*backend*" middleware stack, create file `Configuration/RequestMiddlewares.php` in the respective extension:

```
return [
  // stack name: currently 'frontend' or 'backend'
  'frontend' => [
    'middleware-identifier' => [
      'target' => \ACME\Ext\Middleware::class,
      'description' => '',
      'before' => [
        'another-middleware-identifier',
      ],
      'after' => [
        'yet-another-middleware-identifier',
      ],
    ]
  ]
];
```

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Changes for Developers

- If extensions need to shut down or substitute existing middlewares with an own solution, they can disable an existing middleware by adding the following code to the file:

```
return [
  'frontend' => [
    'middleware-identifier' => [
      'disabled' => true,
    ],
  ],
];
```

- Read more about PSR–15 Initiative

TYPO3

Changes for Developers

PSR-7 Server Requests

- PSR-7 based ServerRequest objects contain a TYPO3-specific attribute object for normalized server parameters

- The object is **for now** available from `ServerRequestInterface` `$request` objects as an attribute

```
/** @var NormalizedParams $normalizedParams */
$normalizedParams = $request->getAttribute('normalizedParams');
$requestPort = $normalizedParams->getRequestPort();
```

- This substitutes `GeneralUtility::getIndpEnv()` and arguments such as SCRIPT_NAME, REQUEST_URI, etc. can be substituted (see documentation for details)

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Changes for Developers

PSR-7 and PSR-15 Related Changes

- The internal request handler classes have been changed:
    - All methods gained strict argument and return type declarations
    - Instead of calling `HttpUtility::redirect()`,
      a `RedirectResponse` is returned
    - Instead of returning null a `NullResponse` is returned

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Changes for Developers

Environment Class

- New base API class provides application-wide information related to paths and PHP internals, which were previously exposed via PHP constants: `TYPO3\CMS\Core\Core\Environment`
- The following static API methods are available:
  - `Environment::isCli()`
  - `Environment::getApplicationContext()`
  - `Environment::isComposerMode()`
  - `Environment::getProjectPath()`
  - `Environment::getPublicPath()`
  - `Environment::getVarPath()`
  - `Environment::getConfigPath()`
  - `Environment::getCurrentScript()`
  - `Environment::isWindows()`
  - `Environment::isUnix()`

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Changes for Developers

Search String Constraints

- New hook allows to modify search string constraints:

```php
// EXT:my_site/ext_localconf.php
$dbRecordList = \TYPO3\CMS\Recordlist\RecordList\DatabaseRecordList::class;
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS'][$dbRecordList]['makeSearchStringConstraints'][123] =
  \MyVendor\MySite\Hooks\DatabaseRecordListHook::class . '->makeSearchStringConstraints';


// EXT:my_site/Classes/Hooks/DatabaseRecordListHook.php
namespace MyVendor\MySite\Hooks;
class DatabaseRecordListHook
{
  public function makeSearchStringConstraints(
    \TYPO3\CMS\Core\Database\Query\QueryBuilder $queryBuilder
    array $constraints,
    string $searchString,
    string $table,
    int $currentPid,
  ) {
    return $constraints;
  }
}
```

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Changes for Developers

Signal/Slot for User Switch

- New signal is emitted when an admin user switches to another user in the TYPO3 backend

```
$dispatcher = \TYPO3\CMS\Core\Utility\GeneralUtility::makeInstance(
  \TYPO3\CMS\Extbase\SignalSlot\Dispatcher::class
);

$dispatcher->connect(
  \TYPO3\CMS\Beuser\Controller\BackendUserController::class,
  'switchUser',
  \MyVendor\MyExtension\Slots\BackendUserController::class,
  'switchUser'
);
```

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Changes for Developers

ViewHelper Changes (1)

- ViewHelper `f:form.textarea` supports two new attributes "readonly" and "required"

  ```
  <!-- Set required attribute -->
  <f:form.textarea name="foobar" required="1" />

  <!-- Set readonly attribute -->
  <f:form.textarea name="foobar" readonly="1" />
  ```

- ViewHelpers `f:uri.typolink` and `f:uri.typolink` support new attribute "absolute"

  ```
  <f:link.typolink parameter="23" absolute="true">Link</f:link.typolink>
  <f:uri.typolink parameter="23" absolute="true" />
  ```

- ViewHelper `f:render` supports new attribute "debug" which makes it possible to disable the debug output in some specials cases

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Changes for Developers

- New ViewHelper renders the icon markup based on a FAL resource
  ```
  <core:iconForResource resource="{file}" />
  ```

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Changes for Developers

Admin Panel Customization

- Admin Panel can be extended by custom modules
- Module registration example:

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['adminpanel']['modules']['yourmodulename'] = [
  'module' => \MyVendor\Package\AdminPanel\YourModule::class,
  'after' => ['preview']
]
```

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Chapter 4:

Deprecated/Removed Functions

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Deuputed/Removed Functions

The language pack update module (formerly known as "Admin Tools → Language") has been moved to "Maintenance → Manage language packs".

As a consequence, the following old PHP classes have been removed:

```
TYPO3\CMS\Lang\Command\LanguageUpdateCommand
TYPO3\CMS\Lang\Controller\LanguageController
TYPO3\CMS\Lang\Domain\Model\Extension
TYPO3\CMS\Lang\Domain\Model\Language
TYPO3\CMS\Lang\Domain\Repository\ExtensionRepository
TYPO3\CMS\Lang\Domain\Repository\LanguageRepository
TYPO3\CMS\Lang\Exception
TYPO3\CMS\Lang\Exception\Language
TYPO3\CMS\Lang\Exception\Ter
TYPO3\CMS\Lang\Exception\XmlParser
```

```
TYPO3\CMS\Lang\Service\RegistryService
TYPO3\CMS\Lang\Service\TerService
TYPO3\CMS\Lang\Service\TranslationService
TYPO3\CMS\Lang\View\AbstractJsonView
TYPO3\CMS\Lang\View\Language\ActivateLanguageJson
TYPO3\CMS\Lang\View\Language\DeactivateLanguageJson
TYPO3\CMS\Lang\View\Language\GetTranslationsJson
TYPO3\CMS\Lang\View\Language\RemoveLanguageJson
TYPO3\CMS\Lang\View\Language\UpdateLanguageJson
TYPO3\CMS\Lang\View\Language\UpdateTranslationJson
```

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Deprecated/Removed Functions

Page Not Found and Error Handling

- The following methods have been marked deprecated:
  TYPO3\CMS\Frontend\Controller\TypoScriptFrontendController

    - ->pageUnavailableAndExit()
    - ->pageNotFoundAndExit()
    - ->checkPageUnavailableHandler()
    - ->pageUnavailableHandler()
    - ->pageNotFoundHandler()
    - ->pageErrorHandler()

- New ErrorController with its custom actions
  unavailableAction(), pageNotFoundAction() and
  accessDeniedAction() should be used instead

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Deprecated/Removed Functions

Admin Panel Refactoring

- As part of the Admin Panel refactoring, the following hook has been marked deprecated:

  `$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['tslib/class.tslib_adminpanel.php']['extendAdminPanel']`

- The following corresponding interface has been marked deprecated:

  `\TYPO3\CMS\Frontend\View\AdminPanelViewHookInterface`

- The following functions of the main class `AdminPanelView` have been marked deprecated:

getAdminPanelHeaderData	isAdminModuleOpen
isAdminModuleEnabled	extGetHead
saveConfigOptions	linkSectionHeader
extGetFeAdminValue	extGetItem
forcePreview	

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Deprecated/Removed Functions

Miscellaneous (1)

- Since the removal of ExtJS, JavaScript files that handle the localization of labels in backend modules became obsolete and have been removed

- System extension sys_note does not use Extbase anymore
    - The following model has been removed:
      TYPO3\CMS\SysNote\Domain\Model\SysNote
    - The following repository returns a plain result now:
      TYPO3\CMS\SysNote\Domain\Repository\SysNoteRepository

- StringFrontend cache frontend has been marked deprecated

- Icons of EXT:form are now available with a new identifier prefix
  (previously: t3-form-icon-, since TYPO3 v9.2: form-)

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Deprecated/Removed Functions

- Class TYPO3\CMS\Frontend\Http\EidRequestHandler has been marked deprecated

- Class TYPO3\CMS\Backend\Http\AjaxRequestHandler has been marked deprecated

- Method TYPO3\CMS\Filelist\FileFacade::getIcon has been marked deprecated

- The following TypoScript attributes have been marked deprecated:
    - page.javascriptLibs
    - page.javascriptLibs.jQuery

- Usage of top.launchView(), that opens certain information in a popup window, has been marked deprecated

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Deprecated/Removed Functions

Many more functions
have been marked deprecated or removed
in TYPO3 version 9.2.

Please see the TYPO3 documentation for further details.

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Chapter 5:

Miscellaneous

TYPO3

Miscellaneous

REST API on get.typo3.org

- https://get.typo3.org has been refactored and provides a REST API for information about TYPO3 releases now
- TYPO3 version 9.2 accesses the REST API to check for available upgrades and to download new versions
- Additional information is shown in the system information toolbar
- If the currently used TYPO3 version is out-of-support or has known security issues, an prominent error is shown

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Chapter 6:

Sources and Authors

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Sources and Authors

Sources

TYPO3 News:
- https://typo3.org/news

Release Infos:
- https://get.typo3.org/release-notes/9.x/TYPO3_CMS_9.2.0
- INSTALL.md and ChangeLog
- typo3/sysext/core/Documentation/Changelog/9.2/*

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

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Sources and Authors

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https://typo3.org/download/release-notes/whats-new

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