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Introduction

TYPO3 Version 11.3 – The Facts

- Release date: 13 July 2021
- Release type: Sprint Release
Introduction

Executive Summary

TYPO3 version 11.3 is the fourth sprint release on the way to the LTS-version (long-term support) in October 2021. This release includes a bunch of backend UX improvements and is now compatible with PHP version 8.0. User experience (UX) is about how users interact with a system or web interface.

In addition to PHP version 7.4, the TYPO3 Core is now also compatible with PHP version 8.0. Developers can leverage many new features, optimizations, and improvements of the programming language that powers TYPO3.

The next release on the roadmap is TYPO3 v11.4. Developers and contributors should be aware that this TYPO3 release (scheduled on 7 September 2021) will mark the feature freeze for the v11 cycle. Now is the best time to submit your code contributions to the TYPO3 Core if you want to see them in TYPO3 v11 LTS.
Introduction

System Requirements

- PHP version 7.4 or 8.0
- PHP settings:
  - `memory_limit` >= 256M
  - `max_execution_time` >= 240s
  - `max_input_vars` >= 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:

  ![MySQL logo](image1)
  ![MariaDB logo](image2)
  ![PostgreSQL logo](image3)
  ![SQL Server logo](image4)
  ![SQLite logo](image5)
Introduction

Development, Support, and Maintenance Timeline

TYPO3 v11

Extended long-term support (ELTS)
The TYPO3 GmbH offers further support options for TYPO3 v11 LTS even after 31 October 2024 for up to two additional years.
Introduction

TYPO3 v11 Release Dates

Planned release dates and their primary focus:

- v11.0 22/Dec/2020  New system requirements and breaking changes
- v11.1 23/Feb/2021  Multi-factor authentication
- v11.2 04/May/2021  Link sharing for TYPO3 backend
- v11.3 13/Jul/2021  UX improvements and PHP v8 support
- v11.4 07/Sep/2021  Feature freeze
- v11.5 05/Oct/2021  LTS Release (long-term support)

https://typo3.org/cms/roadmap
https://typo3.org/article/a-first-glimpse-of-typo3-v11
Introduction

Composer-based Installation Method

- Installation using **PHP Composer** under Linux, macOS, and Windows 10:
  
  $ cd /var/www/site/
  $ composer create-project typo3/cms-base-distribution:^11 typo3v11

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

- The **Composer Helper** online tool makes package selection easy
- Further details are available in the **Installation and Upgrade Guide**
- **Using Composer is the recommended installation method!**
Introduction

Classic Installation Method

■ 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/11.3
$ tar xzf typo3_src-11.3.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-11.3.0 typo3_src
$ ln -s typo3_src/index.php
$ ln -s typo3_src/typo3
$ touch FIRST_INSTALL

■ See Installation and Upgrade Guide for details about Microsoft Windows systems
Chapter 1:

Backend User Interface
Backend User Interface

List Module: Selectable Columns

Backend users can now show/hide columns for each table under Web -> List without the need to switch to the single table view.
Backend User Interface

List Module: Extended View

Secondary actions for each table under Web -> List are now available as a dropdown menu. This was previously known as the extended table view.
Backend User Interface

List Module: Download Data

Backend users can now trigger download in CSV and JSON format through a single button in the table header of each table in Web -> List.
Sharing Backend Links

Sharing TYP03 backend deeplinks is even easier now. Backend users can copy the URL of the page to their clipboard with two mouse clicks.
Backend User Interface

File Selector

The File Selector (e.g. when selecting an image in the "Text and Media" content element) now features a checkbox on the left-hand side for each file. Backend users can check/uncheck/toggle elements easily.
Backend User Interface

Filelist Module

The Filelist backend module has an updated visual appearance that is more consistent with the List module.
## Backend User Interface

### Redirects

The statistics tab of the "Redirects" module (**Site Management -> Redirects**) now includes the date/time when the redirect was created.

<table>
<thead>
<tr>
<th>General</th>
<th>Statistics</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hit Counter</strong></td>
<td>[disable_hitcount]</td>
<td><strong>Enabled</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[9]</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>[hitcount]</td>
<td>4251</td>
</tr>
<tr>
<td><strong>Last Hit On</strong></td>
<td>[lasthit]</td>
<td>13-07-21 08:44</td>
</tr>
<tr>
<td><strong>Created At</strong></td>
<td>[createdon]</td>
<td>24-06-21 08:42</td>
</tr>
</tbody>
</table>
A hint is shown in the page properties, if a page inherits the backend layout from a parent page.
The *Web -> Info* module now contains a new Pagetree overview type that lists the backend layouts used on each page.
Chapter 2:
Changes for Integrators and Developers
Changes for Integrators and Developers

List Module: Selectable Columns

- Backend users can now show/hide columns for each table without the need to switch to the single table view.

- Integrators can disable the "column selector" for specific tables or for all tables by applying User TSconfig:

  # disable the column selector for the table "tt_content"
  mod.web_list.table.tt_content.displayColumnSelector = 0

  # disable the column selector for all tables in general
  mod.web_list.displayColumnSelector = 0
Changes for Integrators and Developers

Sharing Backend Links

- A new constant SHAREABLE_URL is available in the UriBuilder
- Developers can generate deep links (URLs) of pages in the backend using this constant
- For example:

```php
$uri = $uriBuilder->buildUriFromRoute(
    $routeName, $arguments, UriBuilder::SHAREABLE_URL
);
```
Changes for Integrators and Developers

Create Filemount

- TYP03 administrators can now create filemounts through a new option in the context menu
- For example in the Filelist backend module:
Changes for Integrators and Developers

Refresh Dashboard Widgets (1)

- If implemented, backend users can refresh dashboard widgets:
Changes for Integrators and Developers

Refresh Dashboard Widgets (2)

- Set the configuration option `refreshAvailable` to `true`
- Example YAML configuration:

```yaml
dashboard.widget.foobarWidget:
  class: 'TYPO3\CMS\Dashboard\Widgets\RssWidget'
  arguments:
    $view: '@dashboard.views.widget'
    $cache: '@cache.dashboard.rss'
    $options:
      rssFile: 'https://example.com/rss'
      lifeTime: 3600
      refreshAvailable: true
  tags:
    ...
```
Changes for Integrators and Developers

FileDumpController

- The FileDumpController accepts two new parameters:
  - `dl`: force the download of a file
  - `fn`: download the file with an alternative file name
- See the changelog for further details and a code example
- A new File-ViewHelper can be used to leverage the function (see chapter "Extbase and Fluid" for further details)
Changes for Integrators and Developers

Password Reset

- Since TYPO3 v10 LTS, the following global configuration disables the password reset functionality for backend users:
  
  ```
  $GLOBALS['TYPO3_CONF_VARS']['BE']['passwordReset'] = false
  ```

- Changes in TYPO3 v11.3:
  - The configuration only affects the login screen
  - Administrators can still execute a password reset for users through the backend
  - Administrators can still execute the respective CLI command

- A new User TSconfig option disables the function in the backend:
  
  ```
  options.passwordReset = 0
  ```
PSR-3 Logging Messages and Context

To fully adhere to the **PSR-3 specification**, the TYPO3 Core now uses placeholders when executing logging messages:

```php
$this->logger->alert(
    'Text text text {placeholder} text text.',
    ['placeholder' => $variable]
);
```

We encourage extension developers to review their code and follow the specification.

**Do not** implement logging this way:

```php
$this->logger->alert('Text text text ' . $variable . ' text text.');
```
Changes for Integrators and Developers

Deactivate Aspect Ratios

- Setting the key "disabled" in the TCA deactivates a specific aspect ratio:

```php
$GLOBALS['TCA']['tt_content']['types']['textmedia']['columnsOverrides']['assets']['config']['overrideChildTca']['columns']['crop']['config'] = [
    'cropVariants' => [
        'default' => [
            'allowedAspectRatios' => [
                '4:3' => [
                    'disabled' => true
                ],
            ]
        ],
    ]
];
```
Changes for Integrators and Developers

XML Sitemap

- A new TypoScript configuration `excludePagesRecursive` has been added to exclude parts of the page tree from the Sitemap.
- The option accepts a comma-separated list of page IDs.
- For example:

```typo3conf{path=typo3conf}{file=plugin.tx_seo}{line=22}{type=code}
plugin.tx_seo {
    config {
        xmlSitemap {
            sitemaps {
                pages {
                    config {
                        # exclude pages recursively
                        excludePagesRecursive = 2,3
                    }
                }
            }
        }
    }
}
```
Changes for Integrators and Developers

**TCA: t3editor**

- A new TCA option `readOnly` has been added to the "t3editor" render type to prevent users from editing the content.

- TCA code example:

  ```php
  'config' => [
    'type' => 'text',
    'renderType' => 't3editor',
    'format' => 'html',
    'readOnly' => true
  ]
  ```
Changes for Integrators and Developers

Symfony Mailer

- Integrators can now configure the Symfony Mailer using DSN:
  
  ```
  [MAIL][transport] = 'dsn'
  ```

- This makes it possible to use any 3rd-party mail transport provider such as Amazon SES, Gmail, MailChimp, and many more

- Configuration example (Amazon SES):
  
  ```
  [MAIL][dsn] = 'ses+api://ACCESS_KEY:SECRET_KEY@default'
  ```

- Dependencies must be to be installed using Composer

- See [Symfony documentation](https://symfony.com) for further details about available providers
Changes for Integrators and Developers

PageLayoutController (1)

- The PageLayoutController now contains the new method `getModuleTemplate()`.
- This gives developers more options to manipulate the page module when using the `drawHeaderHook` and `drawFooterHook`.
- The new method can be used to retrieve the corresponding `ModuleTemplate` instance as the example code on the next page shows.
Example: add a button to the modules’ button bar

```php
public function drawHeaderHook(array $parameters, PageLayoutController $parentObject)
{
    $moduleTemplate = $parentObject->getModuleTemplate();
    $icon = $moduleTemplate->getIconFactory()->getIcon(‘actions-link’, Icon::SIZE_SMALL);
    $buttonBar = $moduleTemplate->getDocHeaderComponent()->getButtonBar();
    $linkButton = $buttonBar
        ->makeLinkButton()
        ->setHref(‘/typo3/some/url’)
        ->setTitle(‘My custom button’)
        ->setClasses(‘custom-link-class’)
        ->setIcon($icon);
    $buttonBar->addButton($linkButton);
}
```
Changes for Integrators and Developers

Event Listener

- Event listeners do not require the tag "event" in the file Services.yaml anymore.
- TYPO3 automatically detects events based on the type hint in the method signature by using reflection.
- The last line in the following example is not required anymore:

```yaml
TYPO3\CMS\Backend\Security\CategoryPermissionsAspect:
  tags:
    - name: event.listener
      identifier: 'backend-user-permissions'
      method: 'addUserPermissionsToCategoryTreeData'
      event: TYPO3\CMS\Core\Tree\Event\ModifyTreeDataEvent
```
Chapter 3:
Extbase and Fluid
Extbase and Fluid

New File-ViewHelper

- A new ViewHelper has been implemented:
  TYPO3\CMS\Fluid\ViewHelpers\Link\FileViewHelper

- The ViewHelper lets extension authors create links to both public and non-public files easily

- For example:

  `<f:link.file file="{file}" download="true" filename="alternative-name.jpg">Download</f:link.file>`

- The argument file accepts a File object, a FileReference, or a ProcessedFile

- An alternative download file name can be specified using the argument filename
To follow unified standards and state-of-the-art technologies for extension developers, Extbase should feature a clean request/response handling in accordance to the **PSR-7 standard**.

Therefore, the class `TYPO3\CMS\Extbase\Mvc\Request` now implements the PSR-7 `ServerRequestInterface`.

This lets developers access request-related information from the core.

The interface is, for example, available within Extbase controllers: `$this->request`

See the [changelog](#) for further details.
Extbase and Fluid

PSR-7 Request/Response (2)

- Extbase actions **must** return a ResponseInterface in the future
- Extensions are affected if:
  - They throw a StopActionException
  - They use the method redirect()
  - They use the method redirectToUri()

- **Migration example:**
  
  // Code before:
  public function fooAction()
  {
      $this->redirect('otherAction');
  }

  // Code after:
  public function fooAction(): ResponseInterface
  {
      return $this->redirect('otherAction');
  }

TYPO3 Version 11.3 - What's New
As part of this change, the following class has been streamlined: \TYPO3\CMS\Extbase\Mvc\Request

Methods marked as **deprecated**:

- `getBaseUri()`
  (possible migration: `$baseUri = $normalizedParams->getSiteUrl()`)
- `getRequestUri()`
  (possible migration: `$requestUrl = $normalizedParams->getRequestUrl()`)
- `setDispatched()` and `isDispatched()`
  (see changelog for migration options)
Since the method `setMethod()` has been removed, the following exception is no longer available:

```php
\TYPO3\CMS\Extbase\Mvc\Exception\InvalidRequestMethodException
```

Also, the following class has been marked as deprecated:

```php
\TYPO3\CMS\Extbase\Mvc\Web\ReferringRequest
```
Extbase and Fluid

Custom Error Messages for Validation Results

- A new method `addErrorForProperty()` allows developers to add custom error messages
- This applies to properties of Extbase models
- Example in a validator class:

```php
public function isValid(): void
{
    // validation
    $this->addErrorForProperty(
        'object.property.name',
        $this->translateErrorMessage(
            'validator.errormessage',
            'validator.errormessage',
            'myextension',
        ),
        1626134400 // timestamp
    );
}
```
Extbase and Fluid

Parameter Type Evaluation

- Extbase’s legacy type detection of arguments has been marked as deprecated
- Developers should use PHP’s type hints in argument lists
- Example (old code):

```php
/**
 * @param \MyVendor\MyExtension\MyModel $item
 */
public function myAction($item);
```

new code:

```php
public function myAction(\MyVendor\MyExtension\MyModel $item);
```
Chapter 4:
Depreciated/Removed Functions
\section*{Deprecated/Removed Functions}

\textbf{Database Table \texttt{sys_language}}

- Using the database table \texttt{sys_language} has been classified as \texttt{deprecated}
- Site languages used in site configurations are now independent of any \texttt{sys_language} record
- Developers are advised to read the available languages and associated information from the site configuration
- For example, use the new TCA type \texttt{language} instead of \texttt{foreign_table => sys_language} (see \texttt{#57082} for details)
Deprecated/Removed Functions

HTTP Utility

- To properly follow the **PSR-7 standard**, the following methods from the HTTP Utility have been marked as **deprecated**:
  - redirect()
  - setResponseCode()
  - setResponseCodeAndExit()

- See the **changelog** for further details and migration options
Deprecated/Removed Functions

ViewHelper Deprecations

The following ViewHelpers have been marked as **deprecated**:

- TYPO3\CMS\Fluid\ViewHelpers\BaseViewHelper
- TYPO3\CMS\Fluid\ViewHelpers\Be\ContainerViewHelper
- TYPO3\CMS\Backend\ViewHelpers\ModuleLayout\ModuleLayoutViewHelper
- TYPO3\CMS\Backend\ViewHelpers\ModuleLayout\Menu\MenuViewHelper
- TYPO3\CMS\Backend\ViewHelpers\ModuleLayout\Menu\MenuItemViewHelper
- TYPO3\CMS\Backend\ViewHelpers\ModuleLayout\Button\LinkButtonViewHelper
- TYPO3\CMS\Backend\ViewHelpers\ModuleLayout\Button\ShortcutButtonViewHelper
Deprecated/Removed Functions

getPublicUrl() on FAL Objects

- When accessing `getPublicUrl()` on a FAL object, the relative path could be retrieved by setting the following variable:
  
  ````
  $relativeToCurrentScript = true
  ```

- As this is not required anymore (see further details in the changelog), this has been marked as **deprecated**.

- Accessing `isRelativeToCurrentScript()` on the `GeneratePublicUrlForResourceEvent` is also marked as **deprecated**.

- TYPO3’s **Extension Scanner** detects the usage of these cases.
Deprecated/Removed Functions

Method arrayDiffAssocRecursive()

- The behavior of the following method has changed:
  TYP03\CMS\Core\Utility\ArrayUtility::arrayDiffAssocRecursive()

- The function now mimics the behavior of the PHP function
  `array_diff_assoc()` as the name suggests

- This needs to be enabled by setting the third parameter to `true` for
  backwards-compatibility (`$useArrayDiffAssocBehavior`)

- Developers who require the behavior of the PHP function
  `array_diff_key()` should use the new method
  `arrayDiffKeyRecursive()` of the same class
The following two options have been removed from TYPO3’s default configuration:
- BE/loginSecurityLevel
- FE/loginSecurityLevel

The following container entry has been marked as deprecated:
TYPO3\CMS\Core\Localization\LanguageService

The following class has been marked as deprecated:
TYPO3\CMS\Core\Service\AbstractService

The following method has been marked as deprecated:
BackendUtility::viewOnClick()
The following methods of the GeneralUtility class have been marked as **deprecated**:

- rmFromList()
- stdAuthCode()
- compileSelectedGetVarsFromArray()

The callback function of the method `run()` (1st argument) of the following interface has been marked as **deprecated**:

```
TYPO3\CMS\Core\Core\ApplicationInterface->run($execute)
```

The popular inline JavaScript functions `goToModule()` has been marked as **deprecated**
Chapter 5: Miscellaneous
The TYPO3 backend now supports two additional languages:

- **Shona (Bantu)** (ISO 639-1 code: `sn`)
- **Welsh** (ISO 639-1 code: `cy`)

This change enables us to:

- Fetch translated labels for these languages from [translation.typo3.org](http://translation.typo3.org) and CrowdIn
- Switch the backend interface to these languages
- Use these languages in a site configuration
- Create translation files (e.g. `<code>.locallang.xlf`)
Login Throttling

- TYPO3 now limits backend and frontend logins using the Symfony library "Rate Limiter"
- A PSR-15 middleware now uses the rate limit to block further authentication attempts if too many failed logins from the same IP address were detected
- This approach replaces the old solution that was not a state-of-the-art implementation from a security perspective
- See the changelog for configuration options, default values, and further details
Chapter 6:
Sources and Authors
Sources and Authors

Sources

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

**Release Infos:**
- https://get.typo3.org/release-notes/11.x/TYPO3_CMS_11.3.0
- TYPO3 v11 Changelog
- typo3/sysext/core/Documentation/Changelog/11.3/*

**TYPO3 Bug-/Issuetracker:**

**TYPO3 and Fluid Git Repositories:**
- https://git.typo3.org/Packages/TYPO3.CMS.git
- https://github.com/TYPO3/Fluid
Sources and Authors

**TYPO3 CMS What’s New Slides and Translations:**

Pierrick Caillon, Richard Haeser, Jigal van Hemert, Henrietta Kucsovan, Corina Miron, Sinisa Mitrovic, Michael Schams, and Roberto Torresani

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

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