TYPO3 Version 9.1 – What’s New
Summary of the new features, changes and improvements

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The Facts
Introduction

TYPO3 Version 9.1 - The Facts

- Release date: 30 January 2018
- Release type: Sprint Release

Love at first Site

Announcing TYPO3 v9.1
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**

<table>
<thead>
<tr>
<th>Year</th>
<th>Development/Sprint Phase</th>
<th>Regular maintenance</th>
<th>Security and important bugfixes</th>
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<tbody>
<tr>
<td>2017</td>
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<td>2018</td>
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**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

TYPO3 v9 Roadmap

Estimated release dates and their primary focus:

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

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/9.1
  $ tar xzf typo3_src-9.1.0.tar.gz
  $ cd htdocs
  $ ln -s ../typo3_src-9.1.0 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
  
  $ cd /var/www/site/
  $ composer create-project typo3/minimal

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

  An example composer.json file can be downloaded at:
  git.typo3.org/TYPO3CMS/Distributions/Base.git/blob/HEAD:/composer.json
Chapter 1:

Backend User Interface
Site Management

A new main module **Site Management** has been introduced to the TYPO3 core. Its main purpose is to host functions related to the configuration of the site, e.g. languages, domains and routing.

The new system extension EXT:redirects builds the first component of this main module (see next page for details).
New module allows integrators and editors to configure redirects. The function contains a simple hit counter (needs to be enabled) and redirects can be set up unlimited or for a specific time period.

![Redirect Configuration Form](image)
Backend User Interface

Field Names in Debug Mode

- TYP03 integrators and developers often deal with input fields in the backend, e.g. when setting up access permissions or during TsConfig configuration.
- Instead of looking into the source code of the browser, field names are shown for each field generated by the FormEngine now.
- This applies to users with administrator privileges only and requires that the debug mode is enabled in TYP03:

```php
$GLOBALS['TYPO3_CONF_VARS']['BE']['debug']
```
Chapter 2:
Changes for Integrators
Changes for Integrators

Import/Export

Various updates have been done to the system extension impexp:

- **Restriction "maximum number of records" has been removed**
  When exporting pages or records, the restriction to export only a maximum number of records has been removed.

- **Restriction "maximum file size" has been removed**
  When exporting files using the "Export" interface, the restriction to only export files of a certain maximum size has been removed.

- **Size handling removed**
  When exporting or importing structures, records and files wrote size information to export files and checked these during import. This change has no impact on editors.
Changes for Integrators

Redirect Functionality

- Option to configure a redirect, when a domain was added to a specific page or page branch, has been removed.
- Setting up redirects can now be done in the new module Site Management → Redirects.
Chapter 3:
Changes for Developers
filterRecursive()

- Class TYPO3\CMS\Core\Utility\ArrayUtility features a new method to filter multidimensional arrays: filterRecursive()
- This method behaves just like PHP function array_filter()
- If no callback is defined, values are removed, if they equal to boolean "false"
Changes for Developers

Feature Toggles (1)

- New API **Feature Toggles** has been implemented
- The purpose of this API is to better support alternative functionality, while retaining old functionality
- The API checks against a system-wide option array within
  `$TYPO3_CONF_VARS['SYS']['features']`
- Both, the TYPO3 core as well as extensions can then provide alternative functionality for a certain feature
- Typical use cases are for example:
  - Throw exceptions on certain occasions instead of returning a string as an error message.
  - Disable obsolete functionality, which might still be used, but slows down the system.
  - Enable alternative PageNotFound handling for an installation.
Changes for Developers

Feature Toggles (2)

- Features are documented for the TYPO3 core (add link)

- Extension authors can use the API for any custom feature provided by the extension:

```php
if (GeneralUtility::makeInstance(Features::class)->isFeatureEnabled('myFeatureName')) {
    // do custom processing
}
```
"Draw Header" Hook

- New hook has been added to EXT:recordlist to render content above any other content
- Register a hook:

```php
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['cms/layout/db_layout.php']['drawHeaderHook']['sys_note'] = Vendor\Extkey\Hooks\PageHook::class . '->render';
```
Changes for Developers

BE User Login Hook (1)

- On backend user logins, registered hooks are executed.
- This allows TYPO3 developers to build functions that do something when a BE user logs in.
- Notification services are typical use cases:
  - Post a message to Slack or a similar messaging system.
  - Send a text message (SMS) to the user’s mobile number.
  - Pass this event to other systems to monitor suspicious activities.
  - etc.
Changes for Developers

BE User Login Hook (2)

- Register a hook:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['t3lib/class.t3lib_userauthgroup.php']['backendUserLogin'][] = \Vendor\Extkey\Hooks\BackendUserLogin::class . '->dispatch';
```

- This executes method `dispatch()` when a BE user logs in, and passes the user array as a parameter to the method:

```php
public function dispatch($backendUser)
{
    if (isset($backendUser['user']['username'])) {
        $username = $backendUser['user']['username'];
        $email = $backendUser['user']['email'];
        // do something...
    }
}
```
Chapter 4:
Deprecation/Removed Functions
EXT:rsaauth

- Extension EXT:rsaauth has been marked as **deprecated**
- Due to the fast growing acceptance of SSL/TLS, the technology used by the extension is no longer deemed "secure":
  - Only the password is transmitted encrypted
  - Key exchange between server and client is not authenticated (allows man-in-the-middle attacks)
  - Session IDs are transferred unencrypted, but are almost as valuable as passwords
- Use a secure connection (HTTPS) instead, and encrypt all data sent between client and server (TYPO3 frontend and backend)

**Note:** modern browsers warn users by default when form data is submitted via an unencrypted connection – not only passwords or credit card data.
**RawValidator**

- RawValidator has been marked as deprecated
- It was meant to be some kind of NullObject to prevent a "NoSuchValidatorException", but these Exceptions are caught, which makes the validator obsolete
- Due to the fact that the validator does not validate anything, chances are high that this change does not affect any installations at all
- In case developers use the RawValidator, they need to implement it themselves
Chapter 5:
Miscellaneous
Miscellaneous

Various Libraries Upgraded

- "doctrine/dbal" upgraded to version 2.6.3
  http://doctrine-project.org
- "CKEditor" upgraded to version 4.8.0
  https://ckeditor.com
- "D3.js" upgraded to version 4.12.2
  https://d3js.org
- "Moment.js" upgraded to version 2.20.1
  https://momentjs.com
- "CodeMirror" upgraded to version 5.33.0
  https://codemirror.net
- "imagesLoaded" upgraded to version 4.1.4
  https://imagesloaded.desandro.com
Chapter 6:

Sources and Authors
Sources and Authors

**Sources**

**TYPO3 News:**
- [https://typo3.org/news](https://typo3.org/news)

**Release Infos:**
- [https://get.typo3.org/release-notes/9.x/TYPO3_CMS_9.1.0](https://get.typo3.org/release-notes/9.x/TYPO3_CMS_9.1.0)
- `INSTALL.md` and `ChangeLog`
- `typo3/sysext/core/Documentation/Changelog/9.1/*`

**TYPO3 Bug-/Issuetracker:**

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

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Henrietta Kučsovan, Michael Schams and Roberto Torresani

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

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