TYPO3 CMS 6.0
What's New

A quick summary of the features, changes and improvements

v20121122 -

TYPO3

Chapter Overview

- File Abstraction Layer (FAL)
- Extension Manager (EM)
- LocalConfiguration
- General Changes
- Rich Text Editor (RTE)
- TypoScript & TSconfig
- Namespaces
- Logging API
- API
- Internal Changes
- Extbase & Fluid
- Hooks
- Deprecated Functions
- Upgrade
- TYPO3 Branding
- Sources

Introduction

TYPO3 CMS 6.0 “Back to the Future”

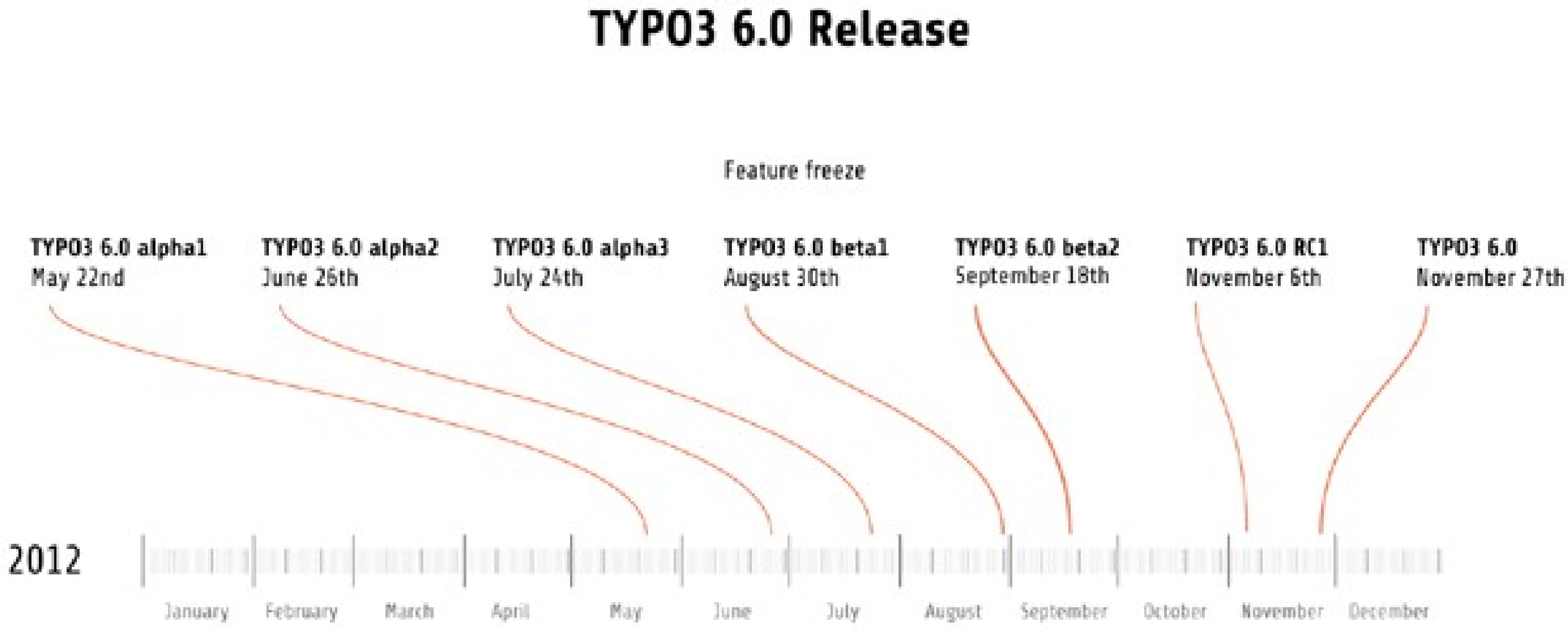
- Get back on track and embrace the future!
  - Enhance user experience
  - Improve and ensure code quality
  - Increase overall security
  - Encourage and strengthen collaboration
- Release team:

Helmut Hummel, Susanne Moog, Christian Kuhn

Introduction

TYPO3 CMS 6.0 “Back to the Future”

- Release date: 27 November 2012
  (re-scheduled from end of October 2012)



Introduction

TYPO3 CMS 6.0 “Back to the Future”

- System Requirements
  - PHP v5.3.x – v5.4.x
  - MySQL v5.1.x – v5.5.x
    (compatibility for MySQL v5.0.x has been dropped)
- Maintenance up to April 2014

File Abstraction Layer
(FAL)

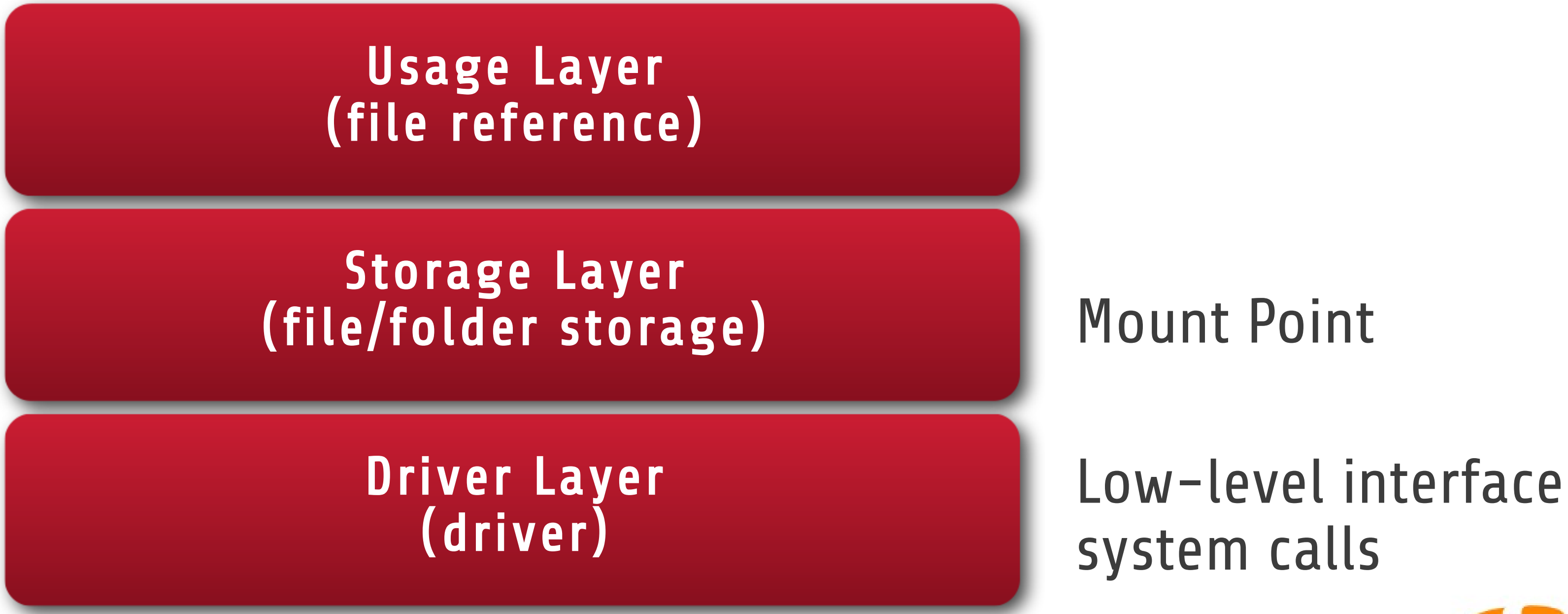
File Abstraction Layer (FAL)

- Low-level file handling through database
- Not media management (not a DAM replacement)
- Kick-off at TYPO3 Developer Days in 2010
- Mainly developed by:

  Benjamin Mack, Steffen Ritter, Ingmar Schlecht, Andreas Wolf
- Part of the BLE project 2011
- Current state: third iteration

File Abstraction Layer (FAL)

- General concept:
  - No copies of files but references only
  - “Storages” are storage containers (remote or local)
  - “Drivers” build storage type (WebDAV, cloud services, etc.)
  - Images as IRRE records, including meta data



Usage Layer
(file reference)

Storage Layer
(file/folder storage)

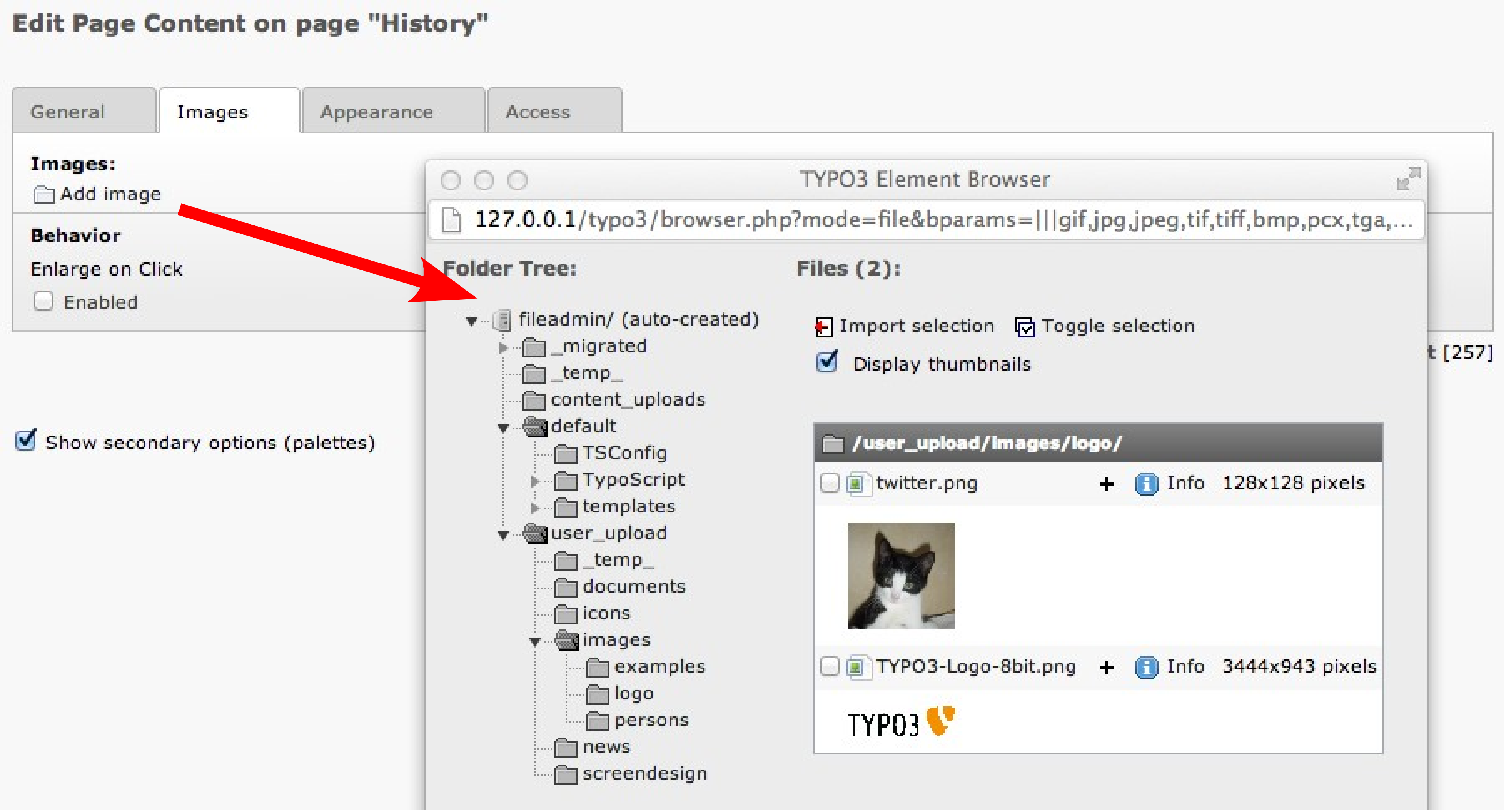
Mount Point

Driver Layer
(driver)

Low-level interface
system calls

File Abstraction Layer (FAL)

- Example: CE text with image



Edit Page Content on page "History"

Images:

Add image

Behavior

Enlarge on Click

□ Enabled

☑ Show secondary options (palettes)

TYPO3 Element Browser

127.0.0.1/typo3/browser.php?mode=file&bparams=|||gif,jpg,jpeg,tif,tiff,bmp,pcx,tga,...

Folder Tree:

```
fileadmin/ (auto-created)
  _migrated
  _temp_
  content_uploads
  default
    TSConfig
    TypoScript
    templates
  user_upload
    _temp_
    documents
    icons
    images
      examples
      logo
      persons
    news
    screendesign
```

Files (2):

Import selection   Toggle selection

☑ Display thumbnails

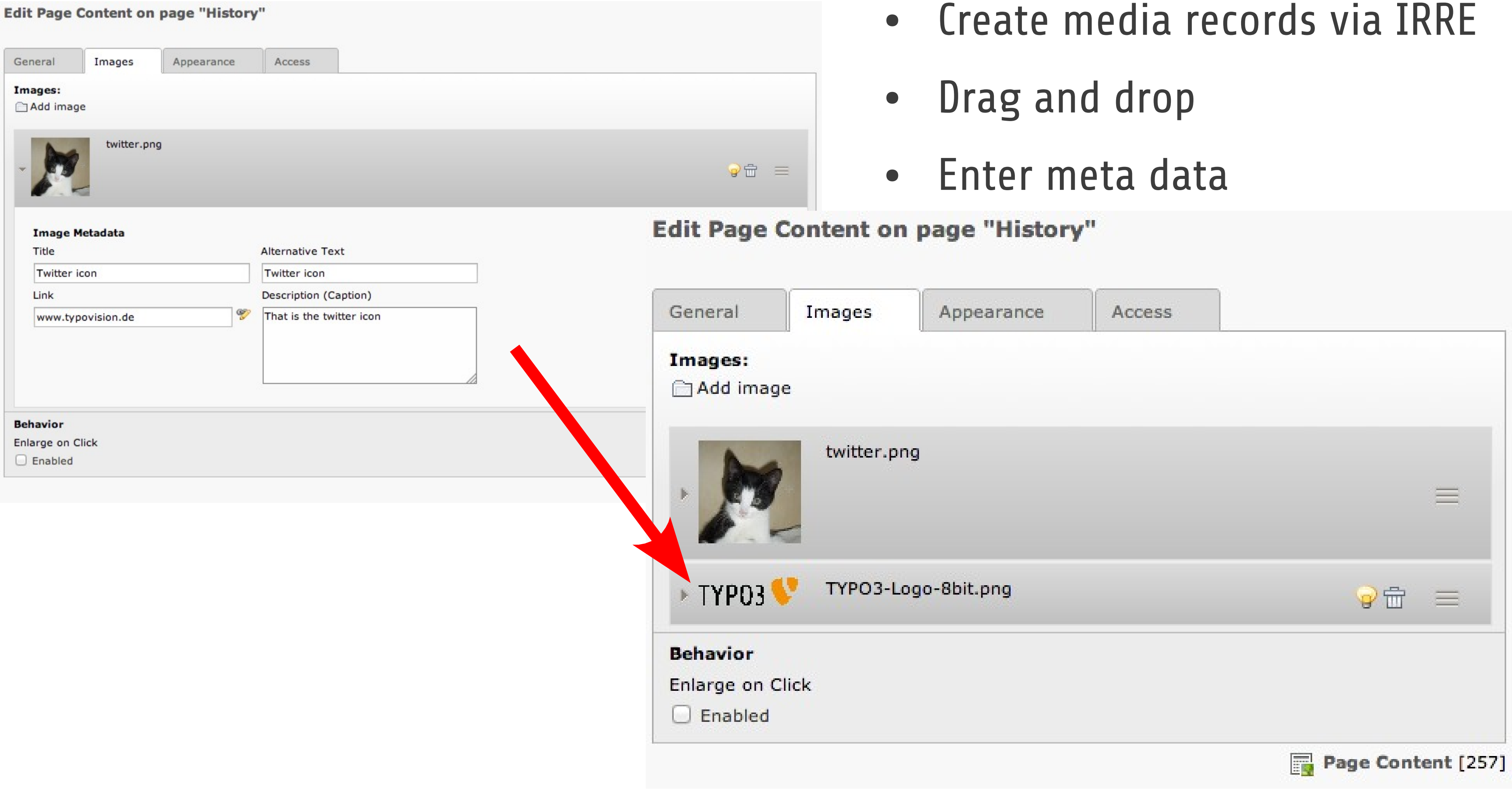
/user_upload/images/logo/

□ twitter.png	+	Info	128x128 pixels
□ TYPO3-Logo-8bit.png	+	Info	3444x943 pixels

File Abstraction Layer (FAL)

- Example: CE text with image

- Create media records via IRRE
- Drag and drop
- Enter meta data



Edit Page Content on page "History"

Images:

twitter.png

Image Metadata

Title: Twitter icon

Alternative Text: Twitter icon

Link: www.typovision.de

Description (Caption): That is the twitter icon

Behavior

Enlarge on Click

□ Enabled

Edit Page Content on page "History"

Images:

twitter.png

TYPO3-Logo-8bit.png

Behavior

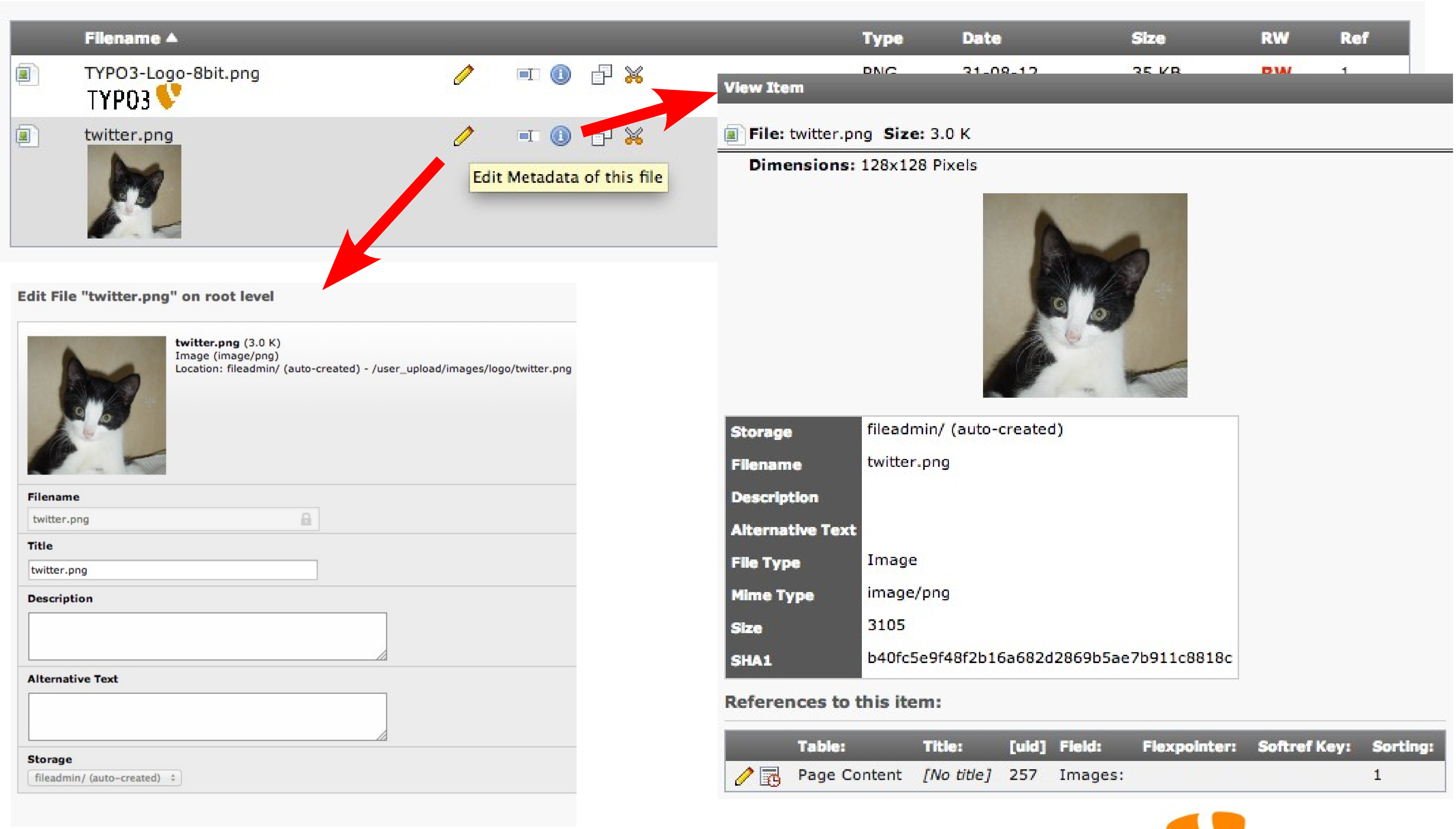
Enlarge on Click

□ Enabled

Page Content [257]

File Abstraction Layer (FAL)

- Example: Fileadmin – edit meta data



Filename ▲	Type	Date	Size	RW	Ref
TYPO3-Logo-8bit.png	PNG	31-08-12	35 KB	RW	1
twitter.png					

Edit File "twitter.png" on root level

twitter.png (3.0 K)
Image (image/png)
Location: fileadmin/ (auto-created) - /user_upload/images/logo/twitter.png

Filename	twitter.png
Title	twitter.png
Description	
Alternative Text	
Storage	fileadmin/ (auto-created)

View Item

File: twitter.png **Size:** 3.0 K

Dimensions: 128x128 Pixels

Storage	fileadmin/ (auto-created)
Filename	twitter.png
Description	
Alternative Text	
File Type	Image
Mime Type	image/png
Size	3105
SHA1	b40fc5e9f48f2b16a682d2869b5ae7b911c8818c

References to this item:

	Table:	Title:	[uid]	Field:	Flexpointer:	Softref Key:	Sorting:
	Page Content	*[No title]*	257	Images:			1

File Abstraction Layer (FAL)

- FAL drivers specify storage type
- For example:
  - **Local**

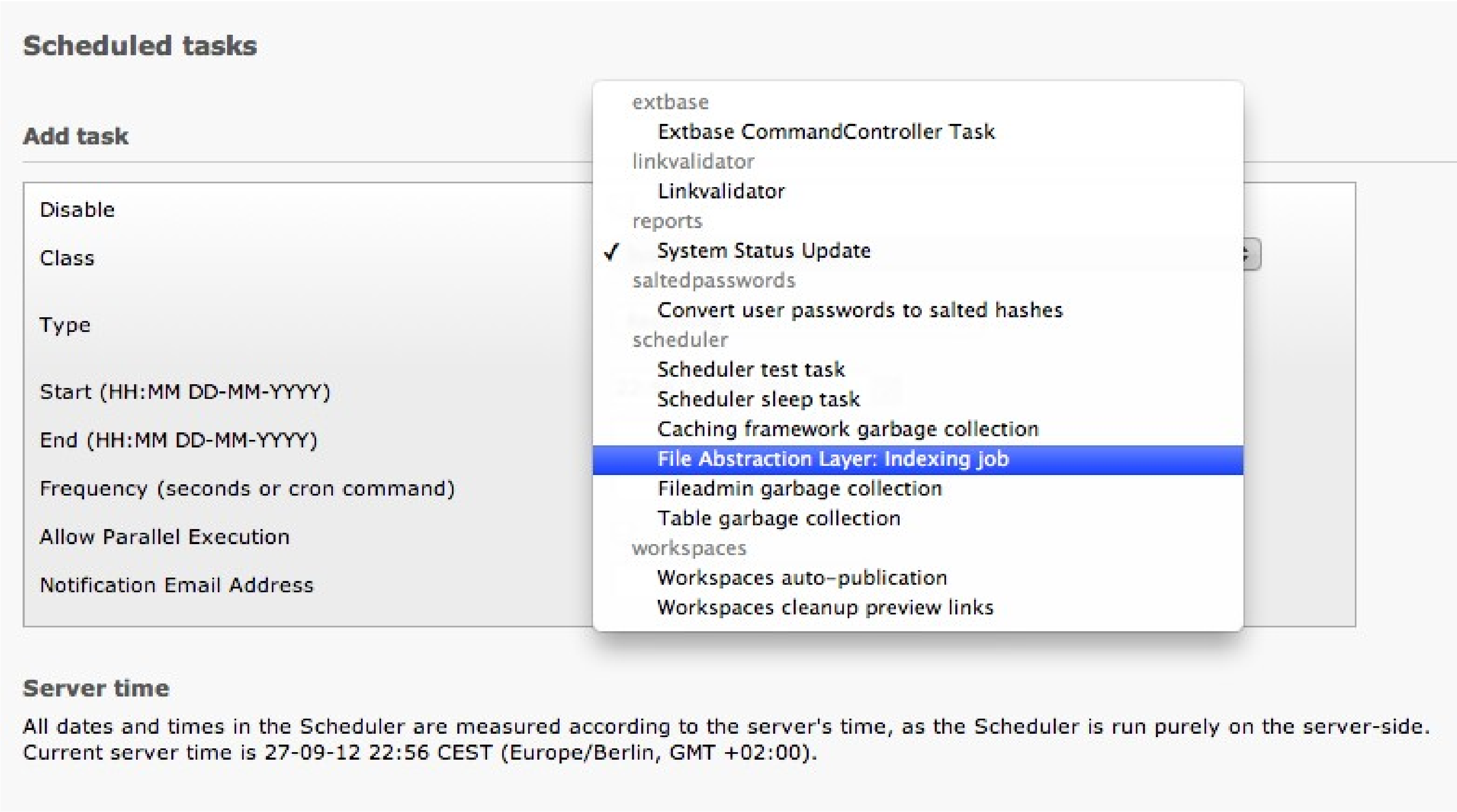
    Provided by TYPO3 CMS out-of-the-box
  - **WebDAV**

    http://forge.typo3.org/projects/show/extension-fal_webdav
  - **Amazon S3**

    http://forge.typo3.org/projects/show/extension-fal_amazons3

File Abstraction Layer (FAL)

- FAL Scheduler Task indexes files



Scheduled tasks

Add task

Disable

Class

Type

Start (HH:MM DD-MM-YYYY)

End (HH:MM DD-MM-YYYY)

Frequency (seconds or cron command)

Allow Parallel Execution

Notification Email Address

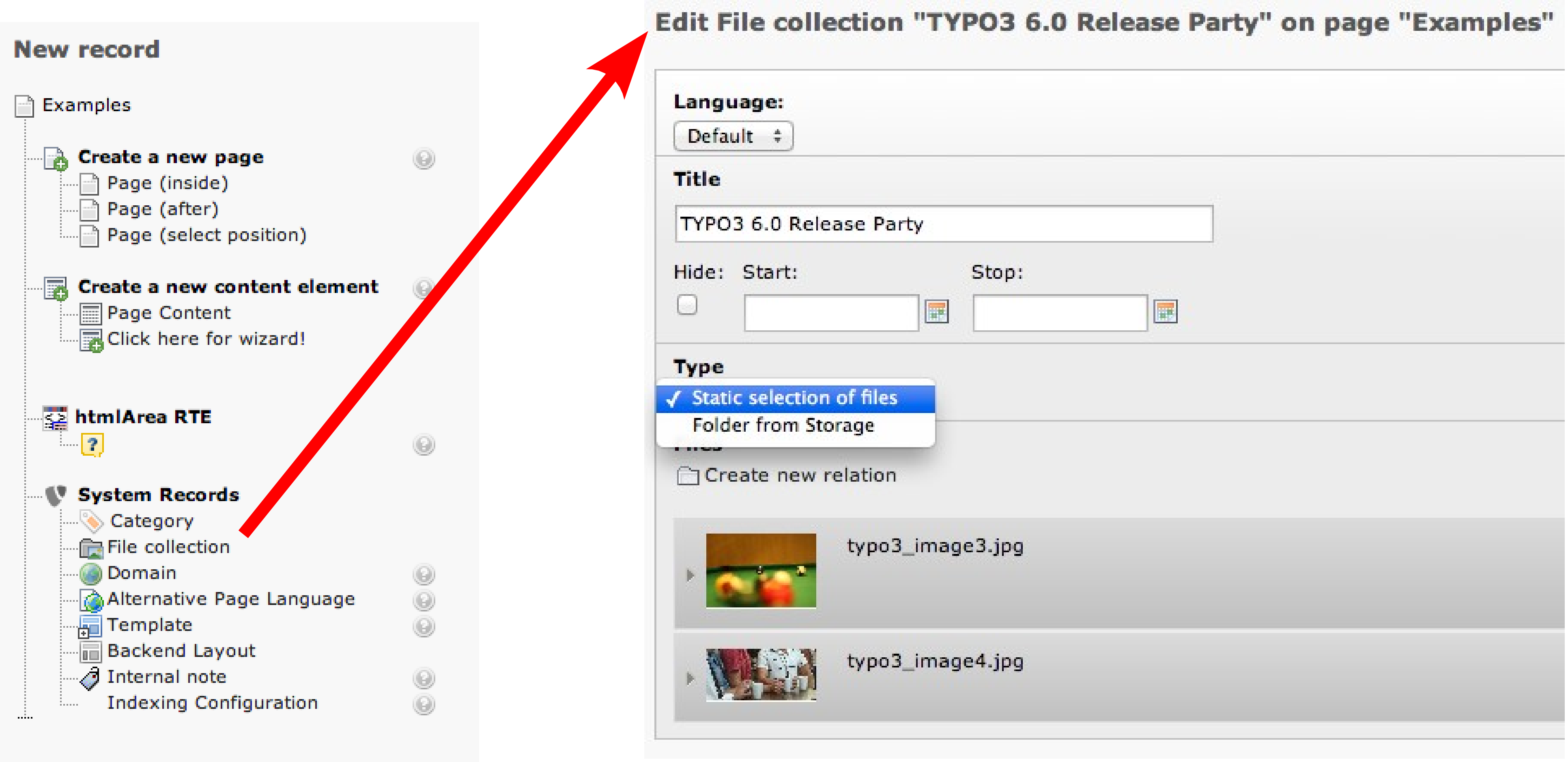
extbase
Extbase CommandController Task
linkvalidator
Linkvalidator
reports
✓ System Status Update
saltedpasswords
Convert user passwords to salted hashes
scheduler
Scheduler test task
Scheduler sleep task
Caching framework garbage collection
File Abstraction Layer: Indexing job
Fileadmin garbage collection
Table garbage collection
workspaces
Workspaces auto-publication
Workspaces cleanup preview links

Server time

All dates and times in the Scheduler are measured according to the server's time, as the Scheduler is run purely on the server-side.
Current server time is 27-09-12 22:56 CEST (Europe/Berlin, GMT +02:00).

File Abstraction Layer (FAL)

- Create File Collections by system records
  - “Static selection of files” or “Folder from Storage”



Edit File collection "TYPO3 6.0 Release Party" on page "Examples"

Language: Default

Title: TYPO3 6.0 Release Party

Hide: □ Start: Stop:

Type
✓ Static selection of files
Folder from Storage

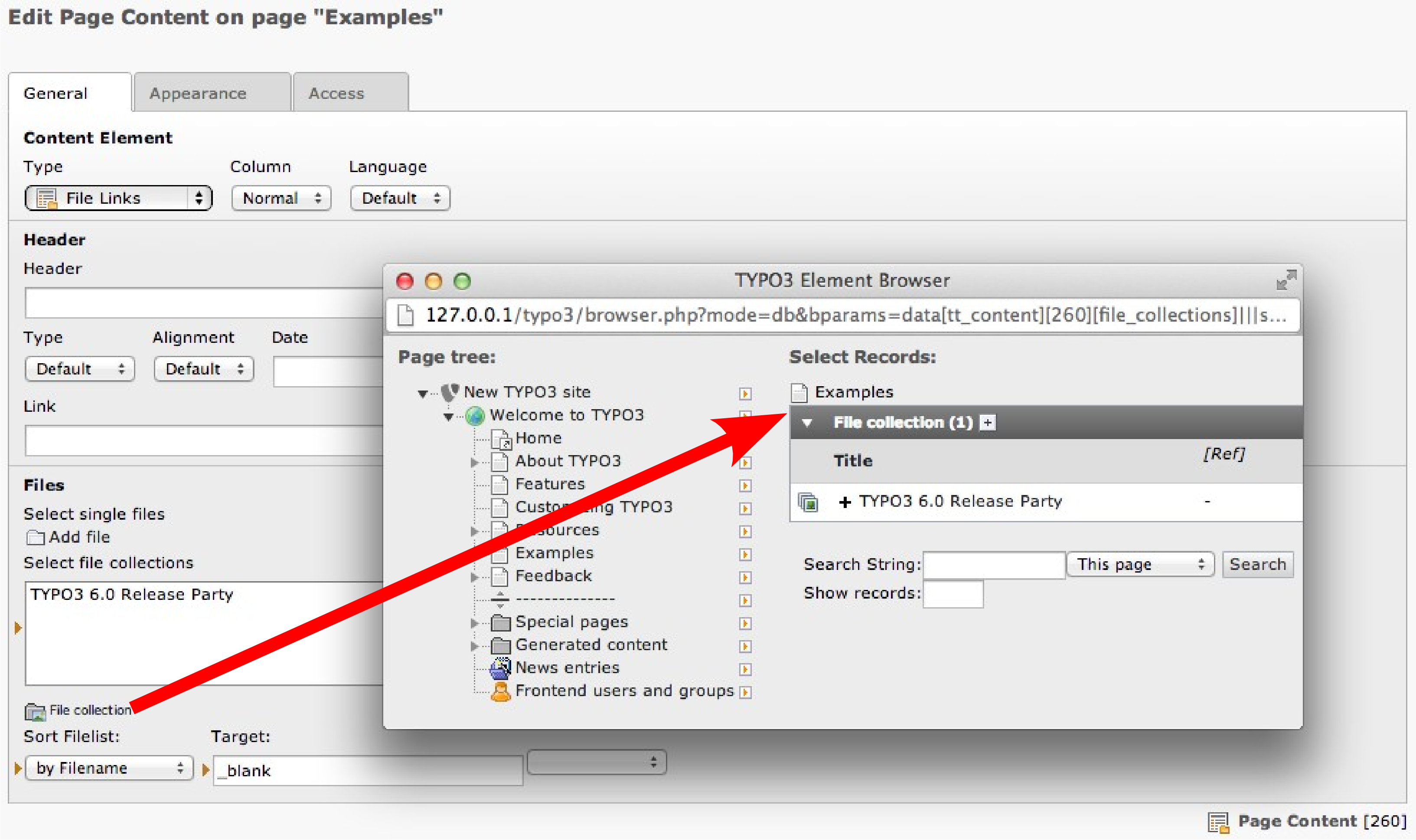
Files

typo3_image3.jpg

typo3_image4.jpg

File Abstraction Layer (FAL)

- Referencing of File Collections
  (e.g. content object “File Links”)



Edit Page Content on page "Examples"

General | Appearance | Access

Content Element

Type: File Links

Column: Normal

Language: Default

Header

Header:

Type: Default

Alignment: Default

Date:

Link:

Files

Select single files

Add file

Select file collections

TYPO3 6.0 Release Party

File collection

Sort Filelist: by Filename

Target: _blank

Page Content [260]

TYPO3 Element Browser

127.0.0.1/typo3/browser.php?mode=db&bparams=data[tt_content][260][file_collections]|||s...

Select Records:

Examples

File collection (1)

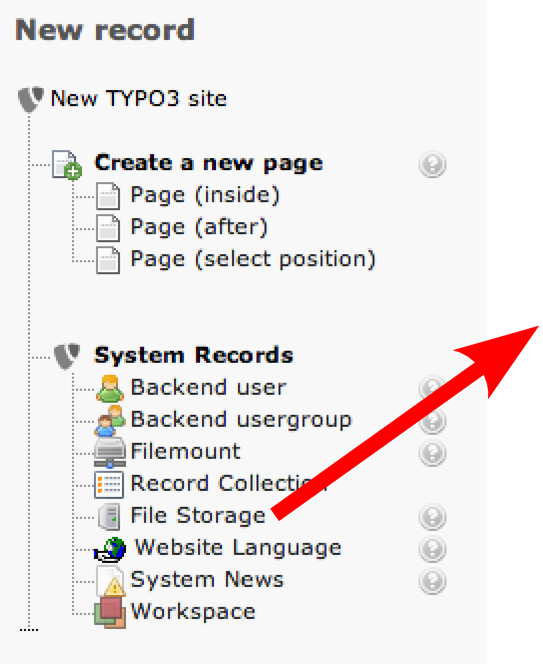
Title	[Ref]
+ TYPO3 6.0 Release Party	-

Search String: This page Search

Show records:

File Abstraction Layer (FAL)

- Create File Storage by system records

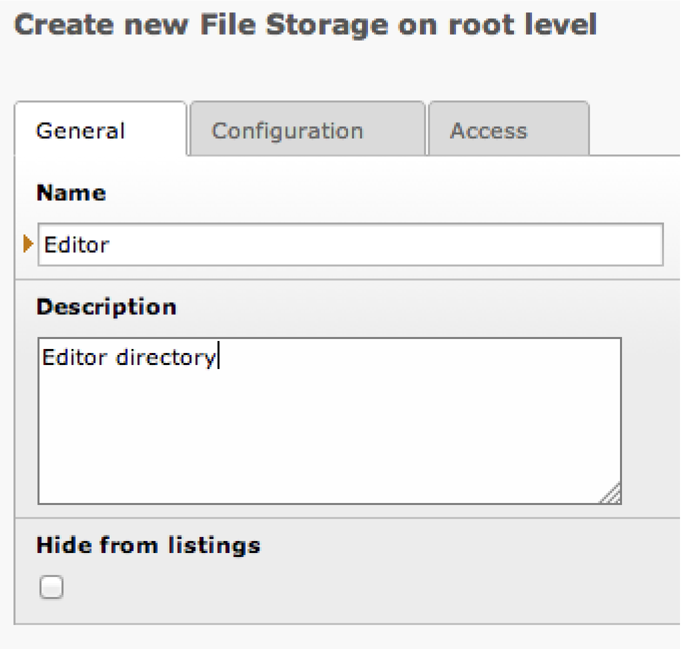


New record

New TYPO3 site

Create a new page
- Page (inside)
- Page (after)
- Page (select position)

System Records
- Backend user
- Backend usergroup
- Filemount
- Record Collecti
- File Storage
- Website Language
- System News
- Workspace

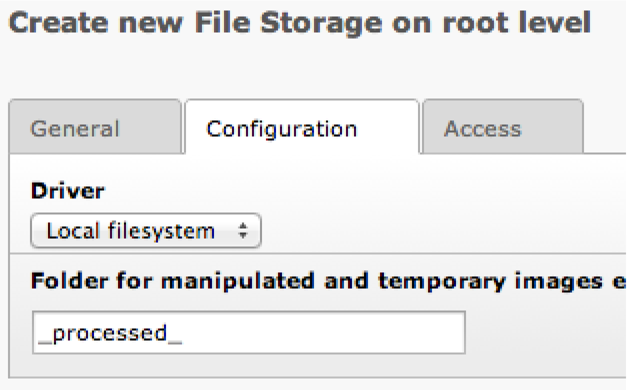


Create new File Storage on root level

Name: Editor

Description: Editor directory

Hide from listings: □

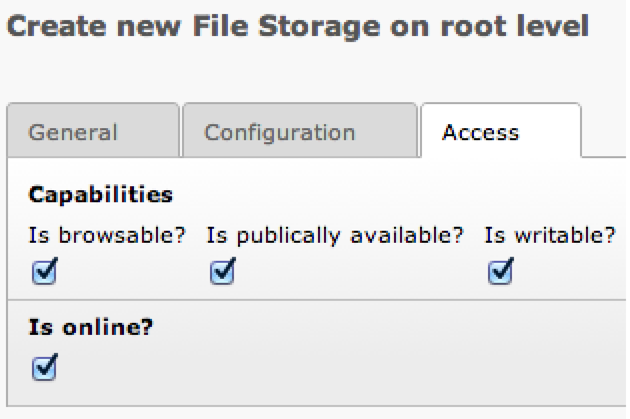


Create new File Storage on root level

Driver: Local filesystem

Folder for manipulated and temporary images e

processed



Create new File Storage on root level

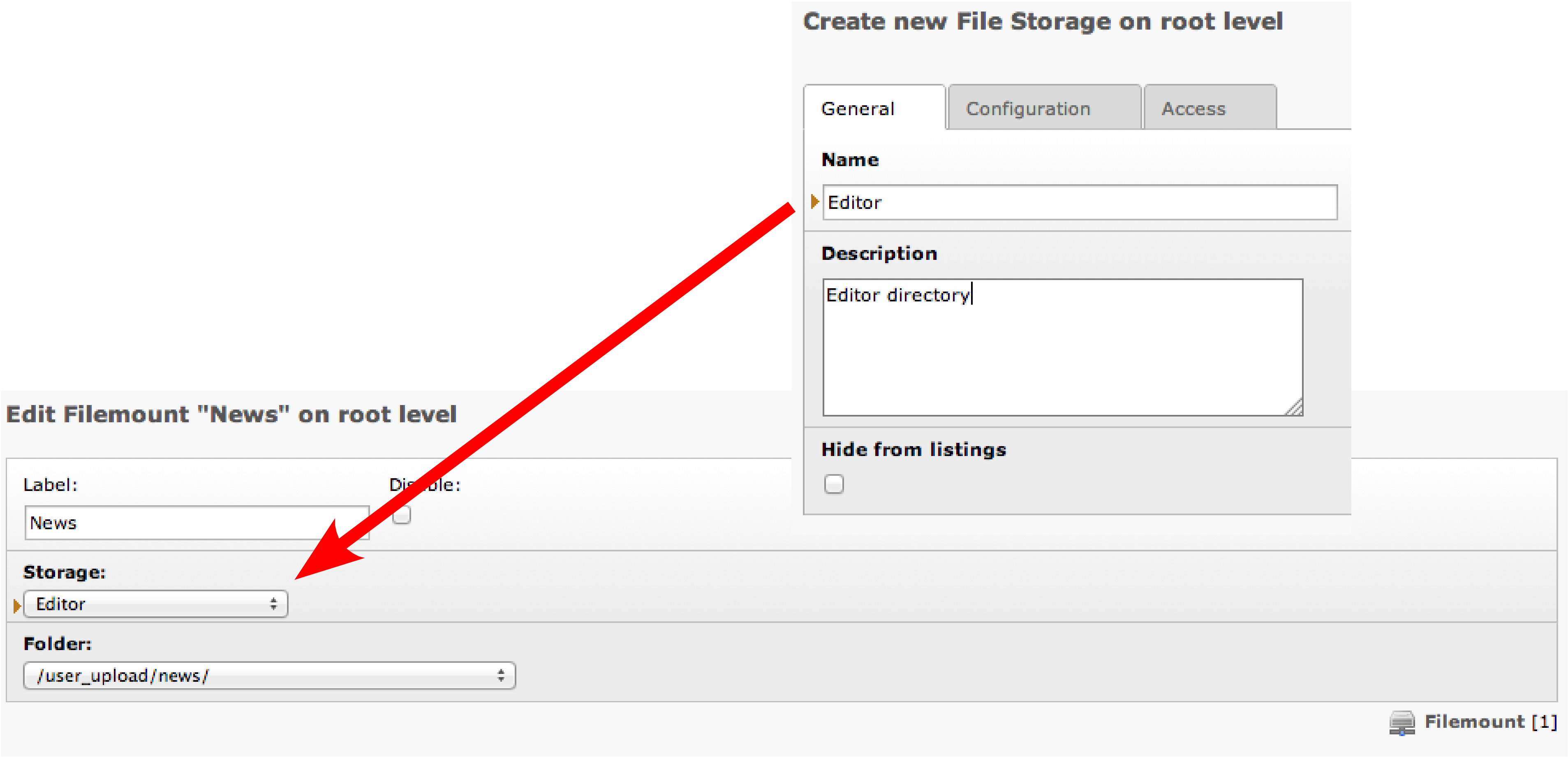
Capabilities

Is browsable? ☑ Is publically available? ☑ Is writable? ☑

Is online? ☑

File Abstraction Layer (FAL)

- Select File Storage (e.g. at Filemount)



Create new File Storage on root level

Name

Editor

Description

Editor directory

Hide from listings

☐

Edit Filemount "News" on root level

Label: News

Disable: ☐

Storage: Editor

Folder: /user_upload/news/

File Abstraction Layer (FAL)

- New database tables:
  - **sys_file**
    Reflects all files tracked by TYPO3 CMS, including meta data
  - **sys_file_collection**
    Reflects a list of records from “sys_file” table
  - **sys_file_processedfile**
    Temporary files, e.g. thumbnails, previews, etc.
  - **sys_file_reference**
    Builds the relation between a sys_file record and the usage of the records somewhere in TYPO3 CMS (e.g. tt_content)
  - **sys_file_storage**
    Defines the access to the storage type/driver
    (e.g. local, WebDAV, Amazon S3, etc.)

File Abstraction Layer (FAL)

Coding example: file copy

```
$storageUid = 17;
$someFileIdentifier = 'templates/images/banner.jpg';
$someFolderIdentifier = 'website/images/';
$storageRepository = \TYPO3\CMS\Core\Utility\GeneralUtility::makeInstance(
'\TYPO3\CMS\Core\Ressource\StorageRepository');
$storage = $storageRepository->getByUid($storageUid)

// returns a t3lib_file_File object
$file = $storage->getFile($someFileIdentifier);

// returns a t3lib_file_File object
$folder = $storage->getFolder($someFolderIdentifier);

// returns the t3lib_file_File object of the new, copied file
$file->copyTo($folder);

// or equivalent
$folder->addCopyOfFile($file);
```

File Abstraction Layer (FAL)

Coding example: read file list of a directory

```
$storageRepository = \TYPO3\CMS\Core\Utility\GeneralUtility::makeInstance(
't3lib_file_StorageRepository');
$availableStorages = $storageRepository->findAll();

foreach($availableStorages as $storage) {
$rootFolder = $storage->getRootFolder();
$subFolders = $rootFolder->getSubFolders();
  foreach($subFolders as $subFolder) {
    $filesInSubFolder = $subFolder->getFiles();
    $foldersInSubFolder = $subFolder->getSubFolders();
    ...
  }
}
```

File Abstraction Layer (FAL)

General API:

```
getPublicUrl(\TYPO3\CMS\Core\Resource\ResourceInterface $fileOrFolder,
$relativeToCurrentScript = FALSE)

isPathValid($theFile)

sanitizeFileName($fileName, $charset = '')

getAbsolutePath($file)

getLowLevelFileInfo(\TYPO3\CMS\Core\Resource\FileInterface $file)

hash(\TYPO3\CMS\Core\Resource\FileInterface $file, $hashAlgorithm)

resourceExists($identifier)

fileExists($identifier)

fileExistsInFolder($fileName, \TYPO3\CMS\Core\Resource\Folder $folder)

folderExists($identifier)

folderExistsInFolder($folderName, \TYPO3\CMS\Core\Resource\Folder $folder)
```

File Abstraction Layer (FAL)

Storage API (1/2):

addFile($localFilePath, \TYPO3\CMS\Core\Resource\Folder $targetFolder, $fileName, \TYPO3\CMS\Core\Resource\AbstractFile $updateFileObject = NULL)

createFile($fileName, \TYPO3\CMS\Core\Resource\Folder $parentFolder)

getFile($identifier)

getFileList($path, $start = 0, $numberOfItems = 0, $useFilters = TRUE, $loadIndexRecords = TRUE)

hasFile($identifier)

getFileContents(\TYPO3\CMS\Core\Resource\FileInterface $file)

setFileContents(\TYPO3\CMS\Core\Resource\FileInterface $file, $contents)

deleteFile(\TYPO3\CMS\Core\Resource\FileInterface $file)

copyFile(\TYPO3\CMS\Core\Resource\FileInterface $file, \TYPO3\CMS\Core\Resource\Folder$targetFolder, $targetFileName = NULL, $conflictMode = 'renameNewFile')

copyFileWithinStorage(\TYPO3\CMS\Core\Resource\FileInterface $file, \TYPO3\CMS\Core\Resource\Folder $targetFolder, $fileName)

File Abstraction Layer (FAL)

Storage API (2/2):

```
copyFileToTemporaryPath(\TYPO3\CMS\Core\Resource\FileInterface $file)

moveFile($file, $targetFolder, $targetFileName = NULL, $conflictMode =
'renameNewFile')

moveFileWithinStorage(\TYPO3\CMS\Core\Resource\FileInterface $file,
\TYPO3\CMS\Core\Resource\Folder $targetFolder, $fileName)

renameFile(\TYPO3\CMS\Core\Resource\FileInterface $file, $newName)

updateFile(\TYPO3\CMS\Core\Resource\AbstractFile $file, $identifier = '',
$storage = NULL)

replaceFile(\TYPO3\CMS\Core\Resource\FileInterface $file, $localFilePath)

getFileForLocalProcessing(\TYPO3\CMS\Core\Resource\FileInterface $fileObject,
$writable = TRUE)

getFileInfoByIdentifier($fileIdentifier)

getFileInfo($identifier)

getFilePermissions(\TYPO3\CMS\Core\Resource\FileInterface $file)
```

File Abstraction Layer (FAL)

Folder API:

```
getRootLevelFolder()

getDefaultFolder()

createFolder($newFolderName, \TYPO3\CMS\Core\Resource\Folder $parentFolder)

getFolderInFolder($name, \TYPO3\CMS\Core\Resource\Folder $parentFolder)

moveFolderWithinStorage(\TYPO3\CMS\Core\Resource\Folder $folderToMove,
\TYPO3\CMS\Core\Resource\Folder $targetFolder, $newFolderName)

copyFolderWithinStorage(\TYPO3\CMS\Core\Resource\Folder $folderToCopy,
\TYPO3\CMS\Core\Resource\Folder $targetFolder, $newFolderName)

renameFolder(\TYPO3\CMS\Core\Resource\Folder $folder, $newName)

deleteFolder(\TYPO3\CMS\Core\Resource\Folder $folder, $deleteRecursively =
FALSE)

isFolderEmpty(\TYPO3\CMS\Core\Resource\Folder $folder)

getFolderPermissions(\TYPO3\CMS\Core\Resource\Folder $folder)

isWithin(\TYPO3\CMS\Core\Resource\Folder $container, $content)
```

File Abstraction Layer (FAL)

- FAL TypoScript: access details of file(s)

  getText `data = file:[UID|current]:[fieldName]`

- For example:

  ```
  page.10.data = file:current:title
  ```

  or:

  ```
  page.10.data = file:42:title
  ```

File Abstraction Layer (FAL)

FAL TypoScript: cObject “FILES”

```
20 = FILES
20 {
  references {
    table = pages
    uid.data = page:uid
    fieldName = media
  }
  # or: sys_file_references with UID 42:
  references = 42
  # UIDs from sys_files
  files = 12,14,15
  # with stdWrap
  files.field = some_field
  collections.field = file_collections
  folders.field = select_key
  renderObj = COA
  renderObj {
  10 = IMAGE
  10 {
    file.import.data = file:current:originalUid // file:current:uid
    file.width = 150
    ...
  }
}
```

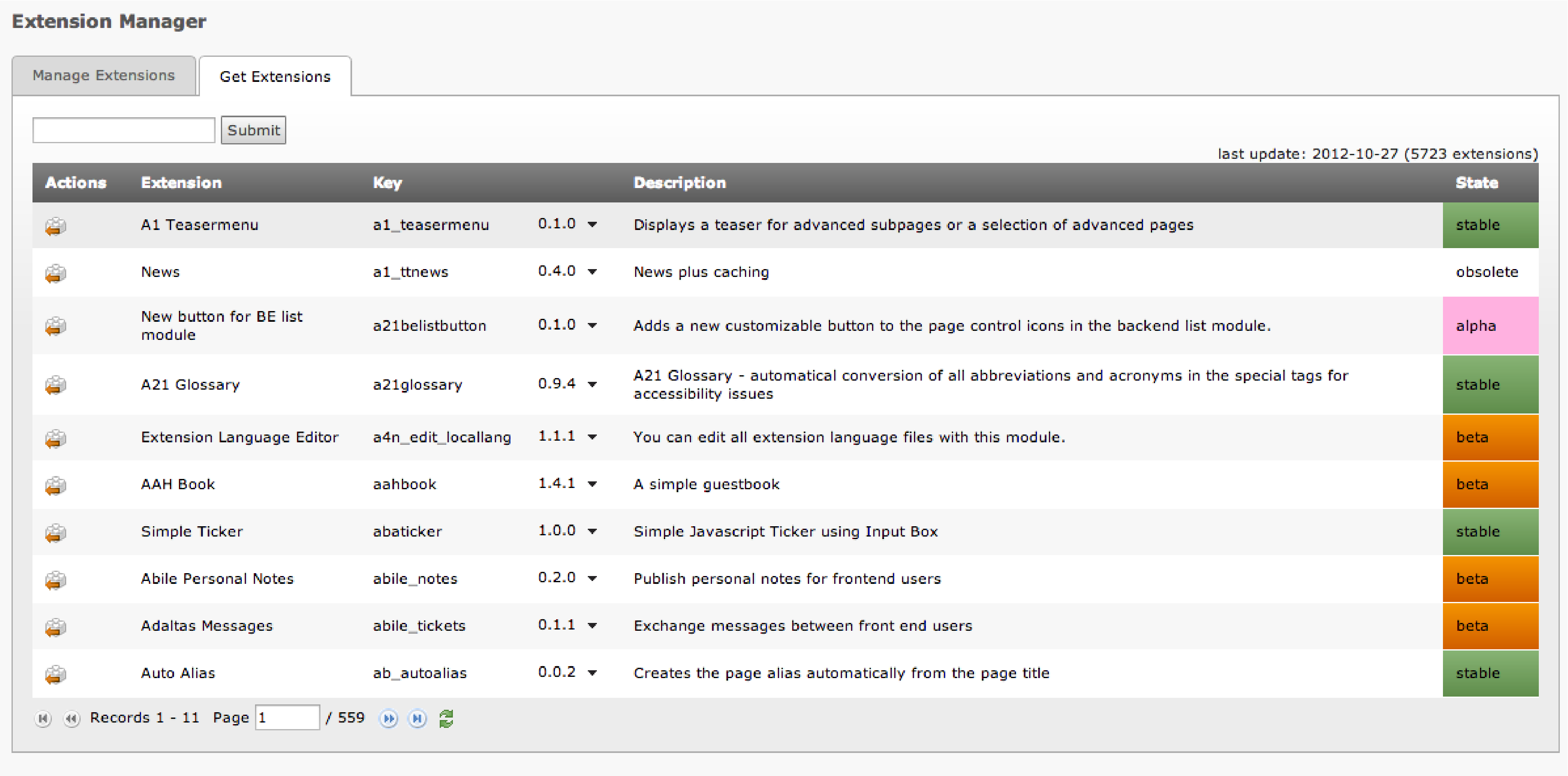
Chapter 2

Extension Manager
(EM)

Extension Manager (EM)

- (Re-)written from scratch (third iteration)
  - Uses Extbase
  - Significantly streamlined
- Language handling separated
  (extension “lang”)
- File editing functionality excluded
  (can be handled by other extensions)
- Extension upload functionality separated
  (extension “extdeveval”)

Extension Manager (EM)

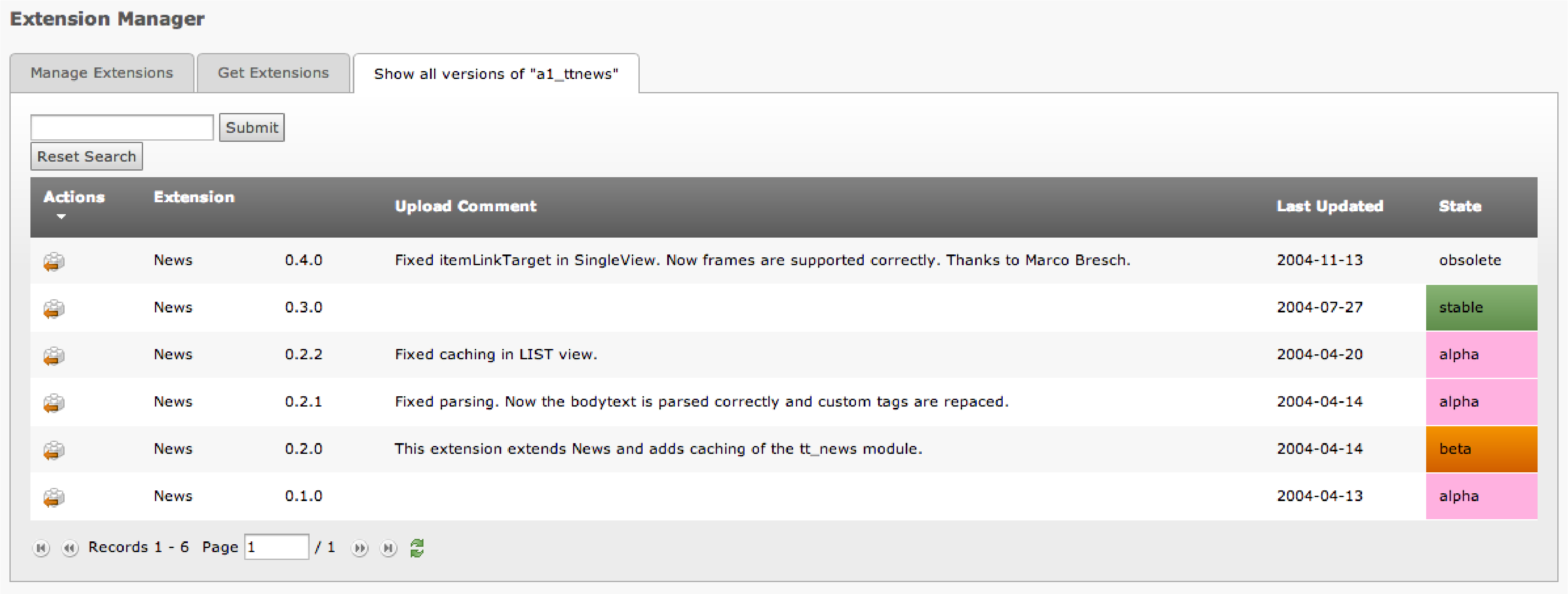


last update: 2012-10-27 (5723 extensions)

Actions	Extension	Key		Description	State
	A1 Teasermenu	a1_teasermenu	0.1.0 ▾	Displays a teaser for advanced subpages or a selection of advanced pages	stable
	News	a1_ttnews	0.4.0 ▾	News plus caching	obsolete
	New button for BE list module	a21belistbutton	0.1.0 ▾	Adds a new customizable button to the page control icons in the backend list module.	alpha
	A21 Glossary	a21glossary	0.9.4 ▾	A21 Glossary - automatical conversion of all abbreviations and acronyms in the special tags for accessibility issues	stable
	Extension Language Editor	a4n_edit_locallang	1.1.1 ▾	You can edit all extension language files with this module.	beta
	AAH Book	aahbook	1.4.1 ▾	A simple guestbook	beta
	Simple Ticker	abaticker	1.0.0 ▾	Simple Javascript Ticker using Input Box	stable
	Abile Personal Notes	abile_notes	0.2.0 ▾	Publish personal notes for frontend users	beta
	Adaltas Messages	abile_tickets	0.1.1 ▾	Exchange messages between front end users	beta
	Auto Alias	ab_autoalias	0.0.2 ▾	Creates the page alias automatically from the page title	stable

Records 1 - 11 Page 1 / 559

Extension Manager (EM)



Extension Manager

Actions	Extension		Upload Comment	Last Updated	State
	News	0.4.0	Fixed itemLinkTarget in SingleView. Now frames are supported correctly. Thanks to Marco Bresch.	2004-11-13	obsolete
	News	0.3.0		2004-07-27	stable
	News	0.2.2	Fixed caching in LIST view.	2004-04-20	alpha
	News	0.2.1	Fixed parsing. Now the bodytext is parsed correctly and custom tags are repaced.	2004-04-14	alpha
	News	0.2.0	This extension extends News and adds caching of the tt_news module.	2004-04-14	beta
	News	0.1.0		2004-04-13	alpha

Records 1 - 6 Page 1 / 1

Extension Manager (EM)

- Multiple repositories not supported (yet)

  (currently “TYPO3.org Main Repository” is the only entry)
- Database tables
  - Before:

    ```
    cache_extensions
    sys_ter
    ```
  - Now:

    ```
    tx_extensionmanager_domain_model_extension
    tx_extensionmanager_domain_model_repository
    ```

Chapter 3

LocalConfiguration

LocalConfiguration

- New global configuration file
  - Before: `typo3conf/localconf.php`
  - Now: `typo3conf/LocalConfiguration.php`
- Configuration changes (for example triggered by EM) force a re-generation of the file
  - Custom code is not allowed in this file
  - Use: `typo3conf/AdditionalConfiguration.php`
- Update Wizard converts `localconf.php` to `LocalConfiguration.php` automatically

LocalConfiguration

Typical content of `typo3conf/LocalConfiguration.php`

```
return array(
  'BE' => array(
    'disable_exec_function' => 0,
    ...
  ),
  'DB' => array(
    'database' => 'typo3_600b1',
    ...
  ),
  'EXT' => array(
    'extConf' => array(
    'automaketemplate' => 'a:0:{}',
    ...
  ),
  'extList' => 'info,perm, ...', // out-dated
  'extListArray' => array(
    0 => 'info',
    1 => 'perm',
    ...
  ),
...
);
```

LocalConfiguration

- Coding Examples:
  - Get a configuration value

```
\TYPO3\CMS\Core\Configuration\ConfigurationManager::
getLocalConfigurationValueByPath('BE/loginSecurityLevel') == 'rsa'
```

  - Set a configuration value

```
\TYPO3\CMS\Core\Configuration\ConfigurationManager::
setLocalConfigurationValueByPath('BE/loginSecurityLevel', 'rsa');
```

  - Valid keys

```
BE
DB
EXT / extListArray / 1 === 'perm' (paths are defined by '/')
EXTCONF
FE
GFX
SYS
INSTALL
```

LocalConfiguration

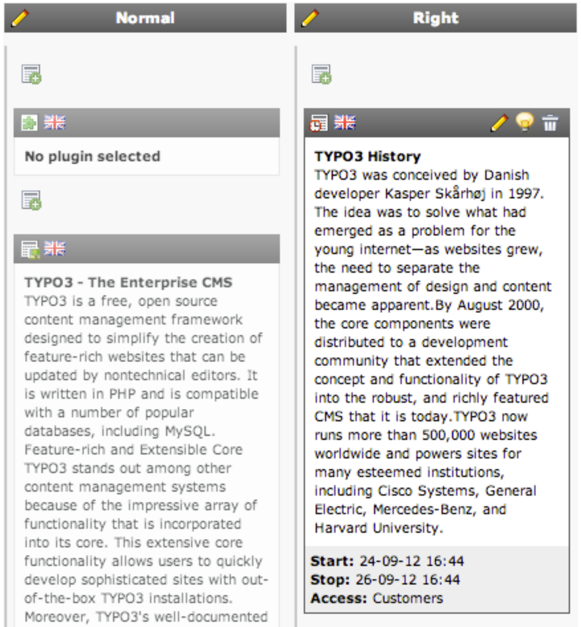
- Default configuration has been moved
  - Before: `t3lib/config_default.php`
  - Now: `t3lib/stddb/DefaultConfiguration.php`
- This applies to the `$TYPO3_CONF_VARS` only (everything else exists in Bootstrap now)

General Changes

General Changes

DRAG & DROP

- Content Elements can be moved by drag & drop



Normal

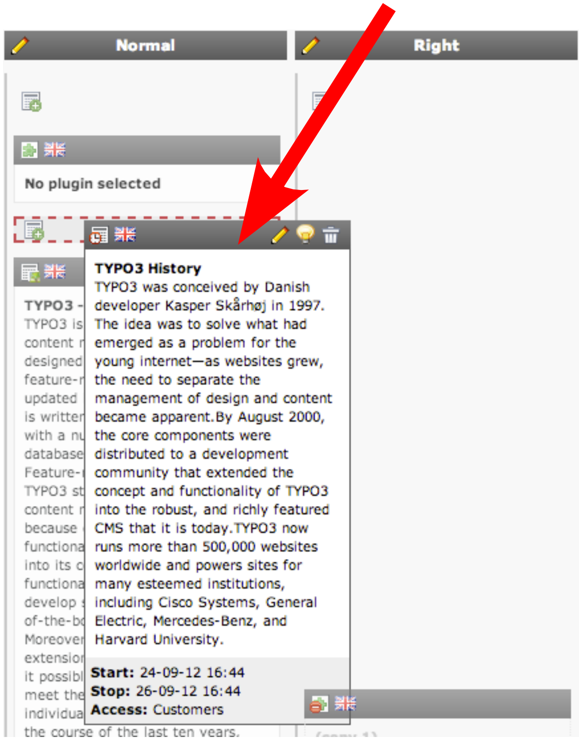
No plugin selected

TYPO3 - The Enterprise CMS
TYPO3 is a free, open source content management framework designed to simplify the creation of feature-rich websites that can be updated by nontechnical editors. It is written in PHP and is compatible with a number of popular databases, including MySQL. Feature-rich and Extensible Core TYPO3 stands out among other content management systems because of the impressive array of functionality that is incorporated into its core. This extensive core functionality allows users to quickly develop sophisticated sites with out-of-the-box TYPO3 installations. Moreover, TYPO3's well-documented

Right

TYPO3 History
TYPO3 was conceived by Danish developer Kasper Skårhøj in 1997. The idea was to solve what had emerged as a problem for the young internet—as websites grew, the need to separate the management of design and content became apparent.By August 2000, the core components were distributed to a development community that extended the concept and functionality of TYPO3 into the robust, and richly featured CMS that it is today.TYPO3 now runs more than 500,000 websites worldwide and powers sites for many esteemed institutions, including Cisco Systems, General Electric, Mercedes-Benz, and Harvard University.

Start: 24-09-12 16:44
Stop: 26-09-12 16:44
Access: Customers



Normal

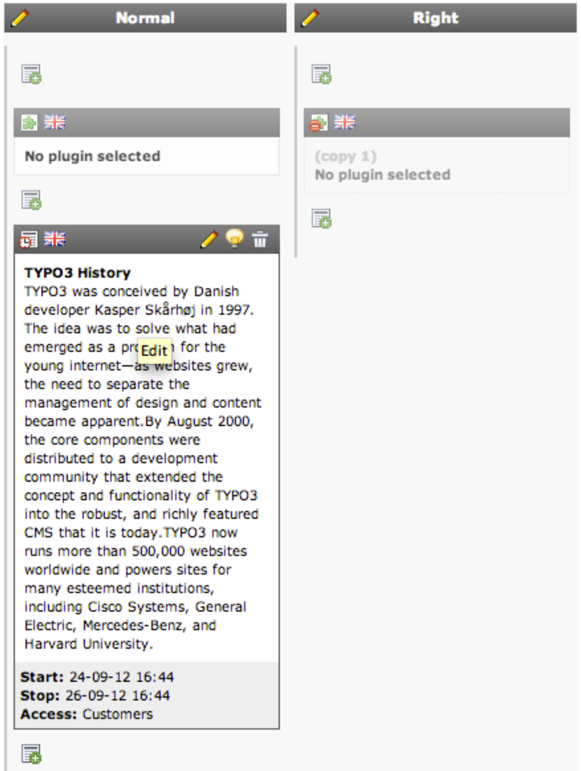
Right

No plugin selected

TYPO3 History
TYPO3 was conceived by Danish developer Kasper Skårhøj in 1997. The idea was to solve what had emerged as a problem for the young internet—as websites grew, the need to separate the management of design and content became apparent.By August 2000, the core components were distributed to a development community that extended the concept and functionality of TYPO3 into the robust, and richly featured CMS that it is today.TYPO3 now runs more than 500,000 websites worldwide and powers sites for many esteemed institutions, including Cisco Systems, General Electric, Mercedes-Benz, and Harvard University.

Start: 24-09-12 16:44
Stop: 26-09-12 16:44
Access: Customers

the course of the last ten years.



Normal

No plugin selected

TYPO3 History
TYPO3 was conceived by Danish developer Kasper Skårhøj in 1997. The idea was to solve what had emerged as a pr Edit for the young internet—as websites grew, the need to separate the management of design and content became apparent.By August 2000, the core components were distributed to a development community that extended the concept and functionality of TYPO3 into the robust, and richly featured CMS that it is today.TYPO3 now runs more than 500,000 websites worldwide and powers sites for many esteemed institutions, including Cisco Systems, General Electric, Mercedes-Benz, and Harvard University.

Start: 24-09-12 16:44
Stop: 26-09-12 16:44
Access: Customers

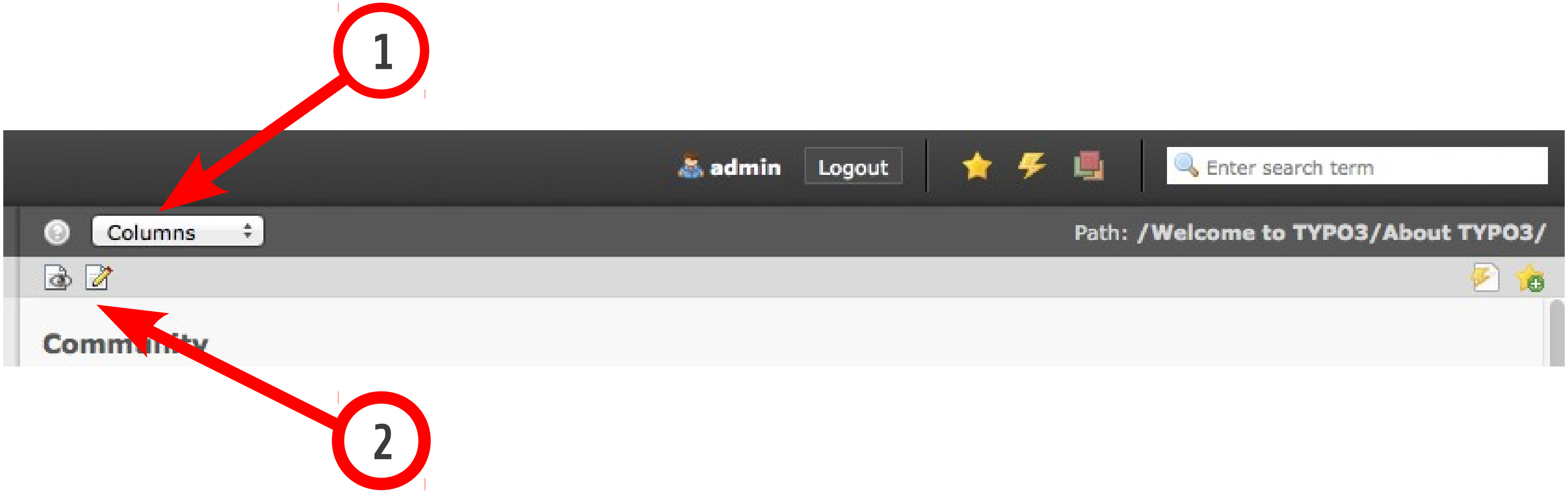
Right

(copy 1)
No plugin selected

General Changes

DOCHEADER

- Improved usability by replacement of first two rows at all backend modules
  - First row: context sensitive help (CSH) and functions (1)
  - Second row: buttons such as save, close, shortcut, etc. (2)



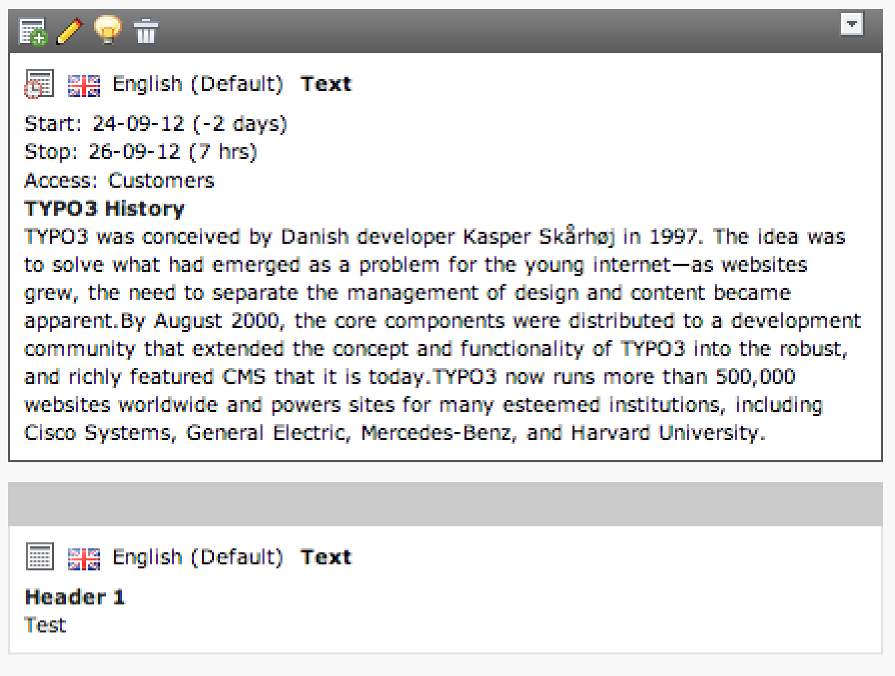
General Changes

CONTENT ELEMENT RENDERING IN PAGE MODULE

- Additional details such as start/stop/access in footer of content element (CE)
- Sort button vertically aligned and with varying background
- Label of CE removed
- CE header shows content type (e.g. text/image) and lock/language icon
- Icon “create new content element” moved outside of CE area (below footer)

General Changes

CONTENT ELEMENT RENDERING IN PAGE MODULE



English (Default) **Text**

Start: 24-09-12 (-2 days)
Stop: 26-09-12 (7 hrs)
Access: Customers

TYPO3 History

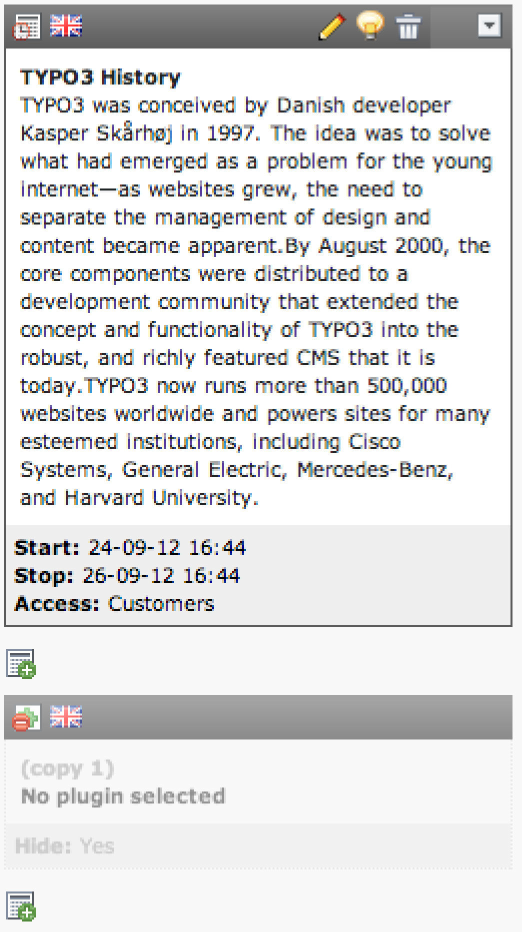
TYPO3 was conceived by Danish developer Kasper Skårhøj in 1997. The idea was to solve what had emerged as a problem for the young internet—as websites grew, the need to separate the management of design and content became apparent.By August 2000, the core components were distributed to a development community that extended the concept and functionality of TYPO3 into the robust, and richly featured CMS that it is today.TYPO3 now runs more than 500,000 websites worldwide and powers sites for many esteemed institutions, including Cisco Systems, General Electric, Mercedes-Benz, and Harvard University.

English (Default) **Text**

Header 1

Test

(before)



TYPO3 History

TYPO3 was conceived by Danish developer Kasper Skårhøj in 1997. The idea was to solve what had emerged as a problem for the young internet—as websites grew, the need to separate the management of design and content became apparent.By August 2000, the core components were distributed to a development community that extended the concept and functionality of TYPO3 into the robust, and richly featured CMS that it is today.TYPO3 now runs more than 500,000 websites worldwide and powers sites for many esteemed institutions, including Cisco Systems, General Electric, Mercedes-Benz, and Harvard University.

Start: 24-09-12 16:44
Stop: 26-09-12 16:44
Access: Customers

(copy 1)
No plugin selected

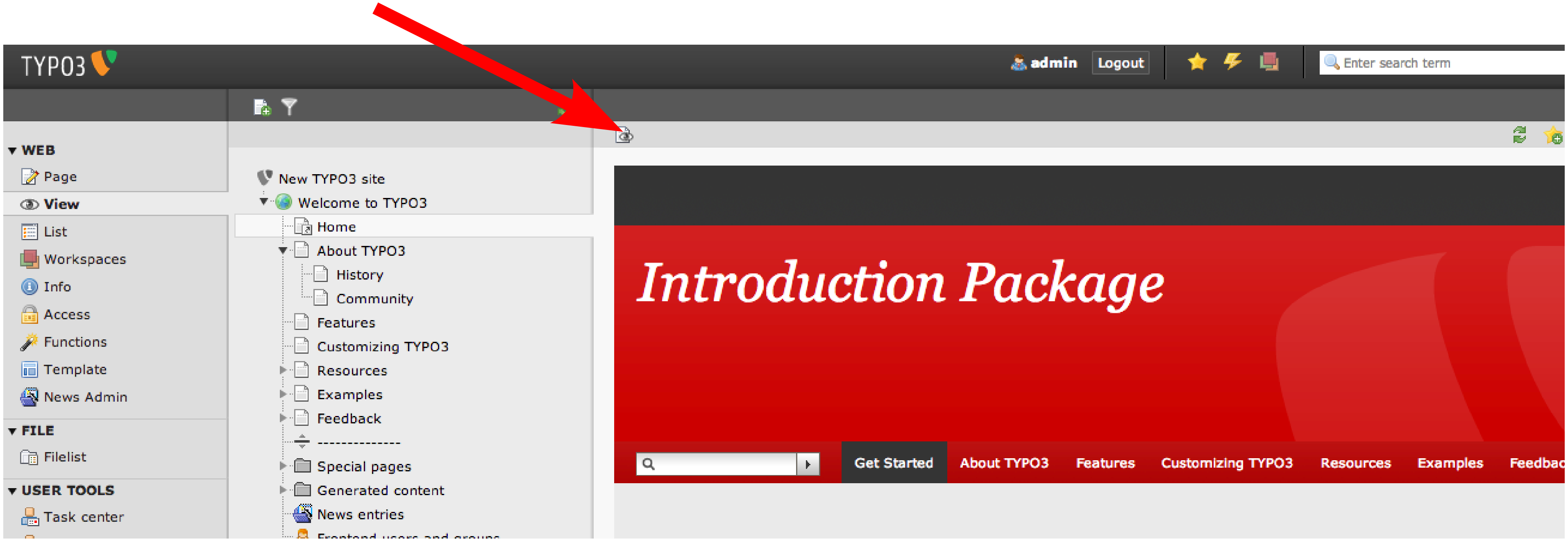
Hide: Yes

(now)

General Changes

VIEW PAGE

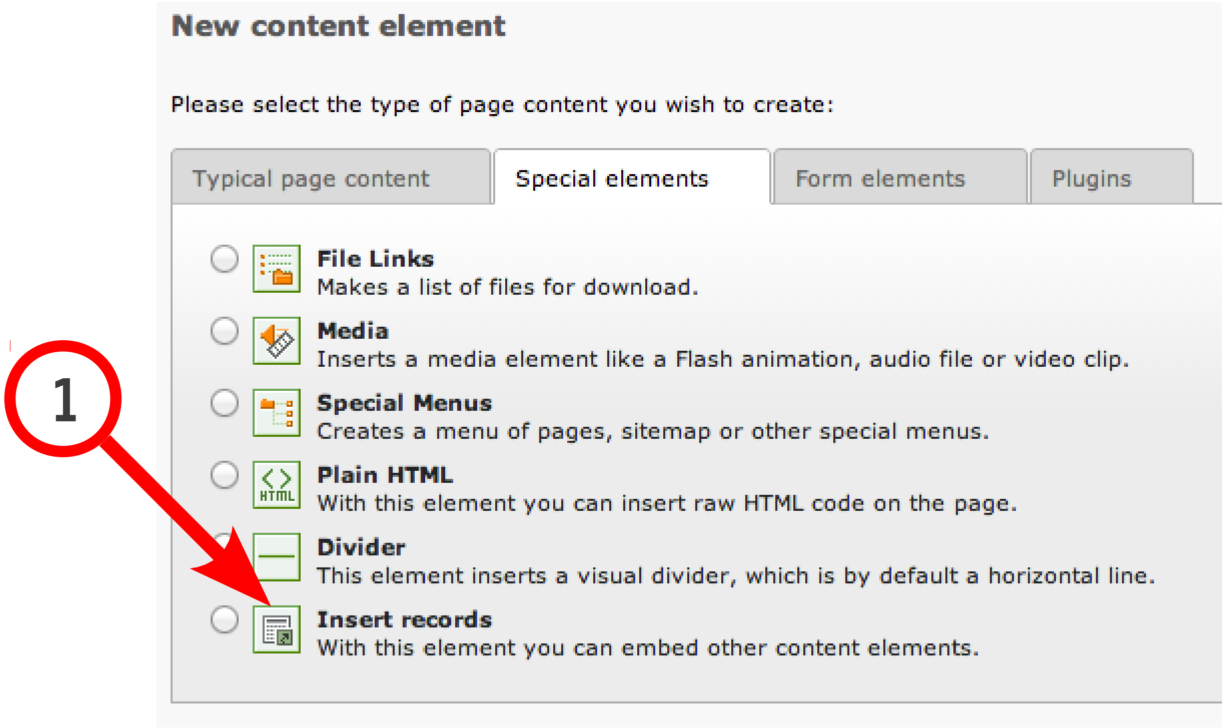
- Icon in module “view” (viewpage) allows editors to show page in new window
- System ext “viewpage” re-developed (Extbase)



General Changes

IMPROVED CE “INSERT RECORDS”

- CE “Insert Records” can be selected when creating a new Content Element (1)
- Page module shows referenced CE (2)



New content element

Please select the type of page content you wish to create:

○ **File Links**
Makes a list of files for download.

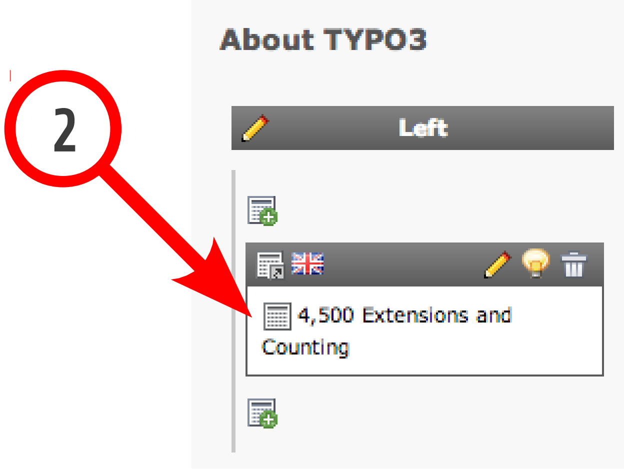
○ **Media**
Inserts a media element like a Flash animation, audio file or video clip.

○ **Special Menus**
Creates a menu of pages, sitemap or other special menus.

○ **Plain HTML**
With this element you can insert raw HTML code on the page.

○ **Divider**
This element inserts a visual divider, which is by default a horizontal line.

○ **Insert records**
With this element you can embed other content elements.



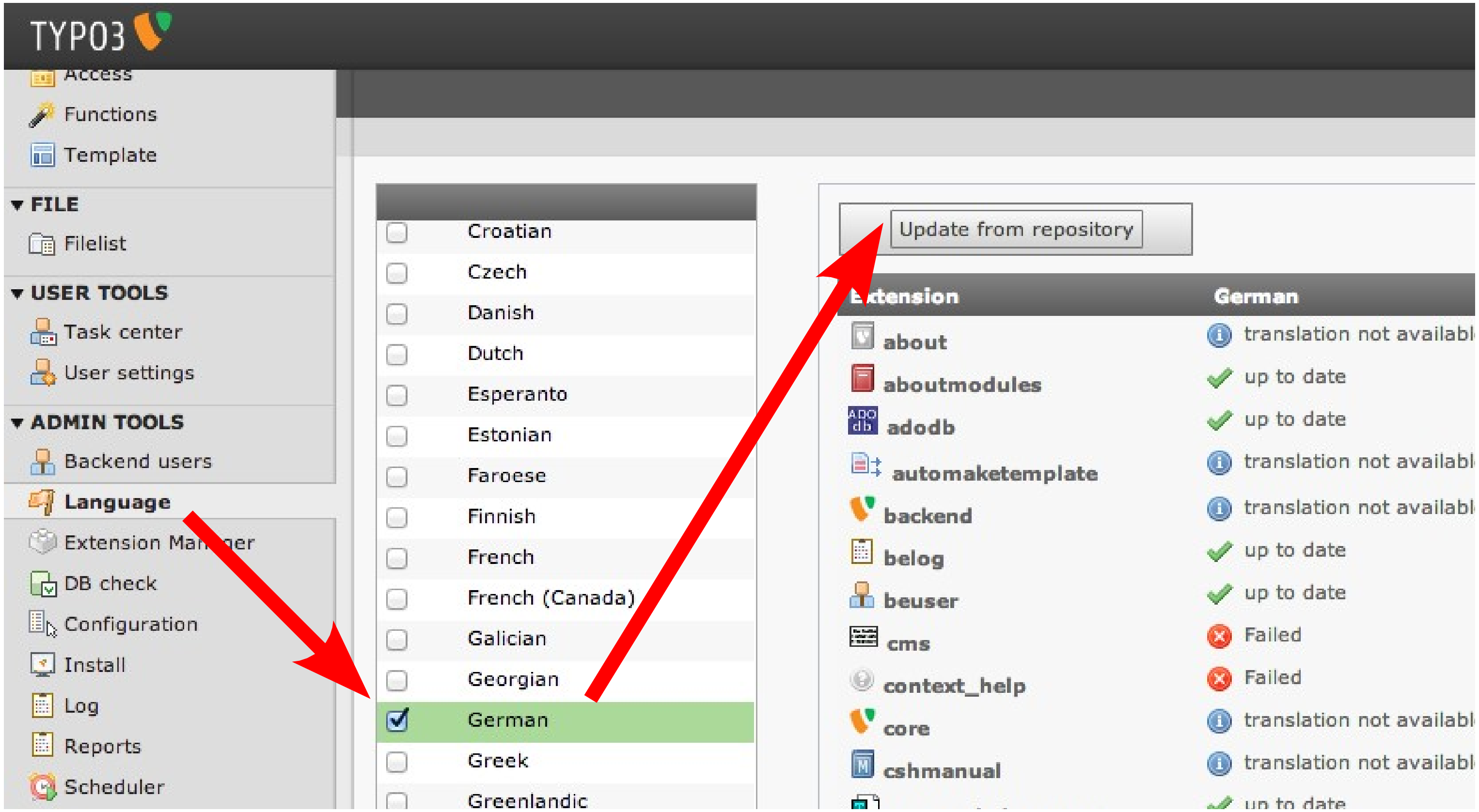
About TYPO3

4,500 Extensions and Counting

General Changes

LANGUAGE HANDLING AND TRANSLATIONS

- Language handling separated from Extension Manager (EM) and now available as its own module



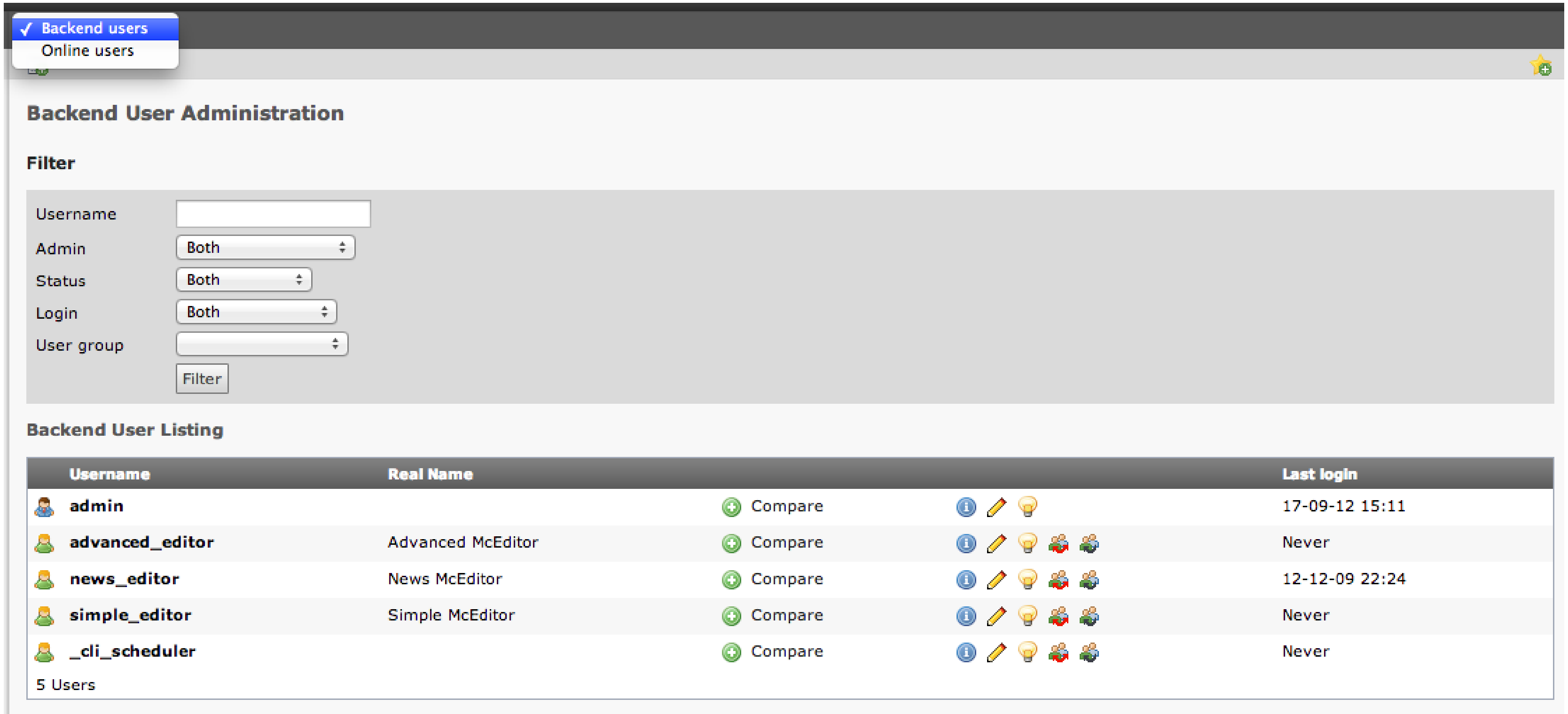
☐ Croatian
☐ Czech
☐ Danish
☐ Dutch
☐ Esperanto
☐ Estonian
☐ Faroese
☐ Finnish
☐ French
☐ French (Canada)
☐ Galician
☐ Georgian
☑ German
☐ Greek
☐ Greenlandic

Extension	German
about	translation not availabl
aboutmodules	✓ up to date
adodb	✓ up to date
automaketemplate	translation not availabl
backend	translation not availabl
belog	✓ up to date
beuser	✓ up to date
cms	Failed
context_help	Failed
core	translation not availabl
cshmanual	translation not availabl
	✓ up to date

General Changes

BACKEND USER ADMINISTRATION (1/2)

- Module “Backend User” (beuser) re-developed
- Uses Extbase and includes search/filter/pagination



Backend User Administration

Filter

Username	
Admin	Both
Status	Both
Login	Both
User group	

Filter

Backend User Listing

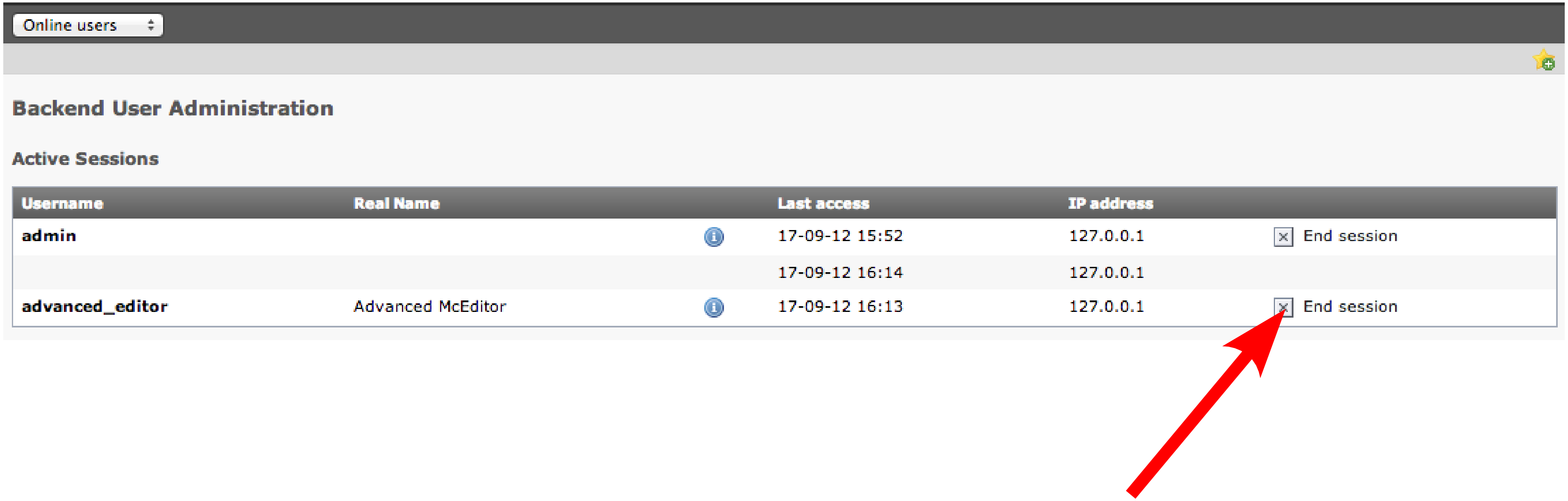
Username	Real Name		Last login
admin		Compare	17-09-12 15:11
advanced_editor	Advanced McEditor	Compare	Never
news_editor	News McEditor	Compare	12-12-09 22:24
simple_editor	Simple McEditor	Compare	Never
_cli_scheduler		Compare	Never

5 Users

General Changes

BACKEND USER ADMINISTRATION (2/2)

- View “Online Users” lists active sessions
- Terminate session with button “End session”



Online users

Backend User Administration

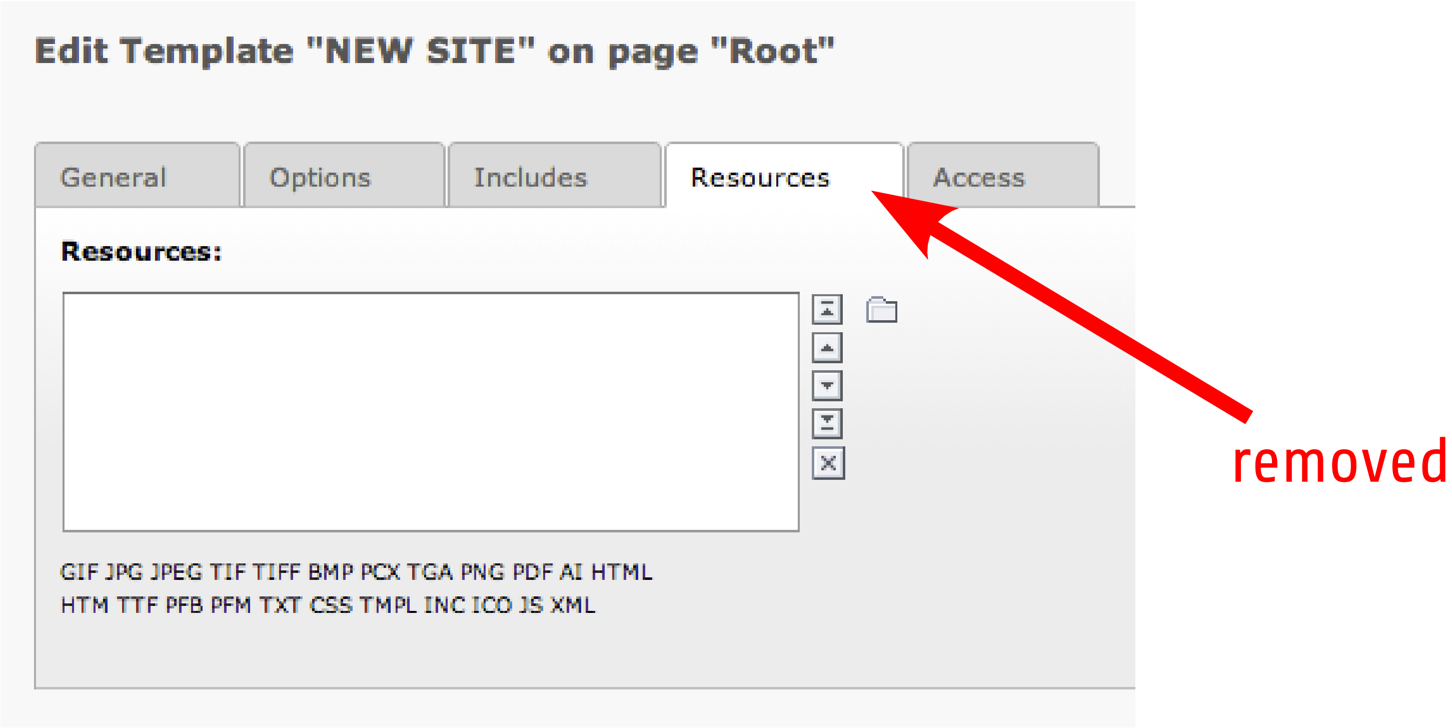
Active Sessions

Username	Real Name		Last access	IP address	
admin		ⓘ	17-09-12 15:52	127.0.0.1	☒ End session
			17-09-12 16:14	127.0.0.1	
advanced_editor	Advanced McEditor	ⓘ	17-09-12 16:13	127.0.0.1	☒ End session

General Changes

TEMPLATE MODULE

- TypoScript Template: tab “Resources” removed



Edit Template "NEW SITE" on page "Root"

Resources:

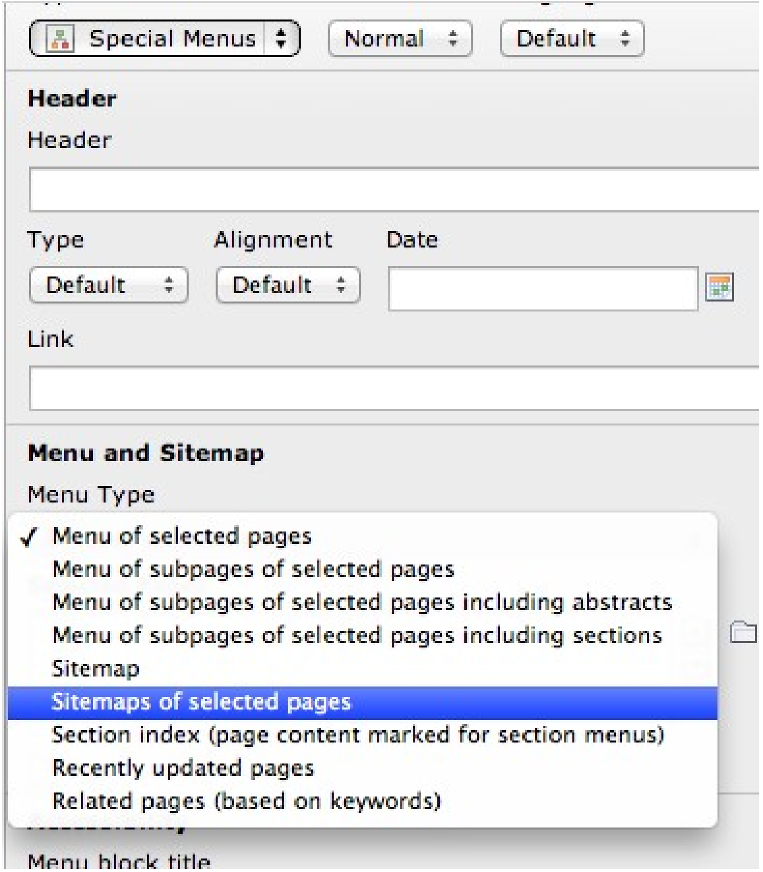
GIF JPG JPEG TIF TIFF BMP PCX TGA PNG PDF AI HTML HTM TTF PFB PFM TXT CSS TMPL INC ICO JS XML

removed

General Changes

SITEMAP OF SELECTED PAGES

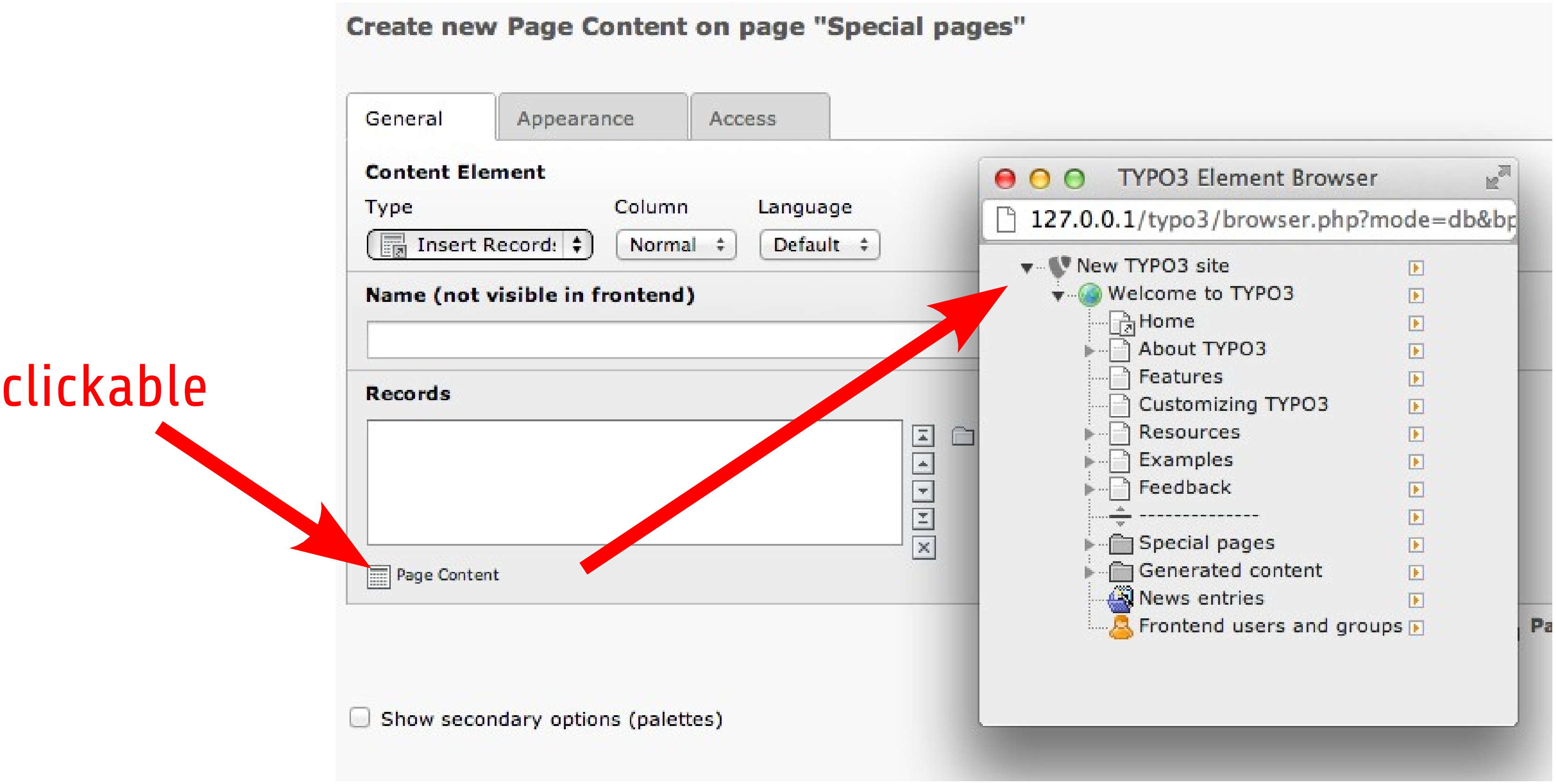
- CE “Menu/Sitemap” renamed to “Special Menus”
- New sitemap type:
  “Sitemap of selected pages”
- Root page is selectable now
  (was tree root before)


Special Menus
Normal
Default
Header
Header
Type
Alignment
Date
Default
Default
Link
Menu and Sitemap
Menu Type
✓ Menu of selected pages
Menu of subpages of selected pages
Menu of subpages of selected pages including abstracts
Menu of subpages of selected pages including sections
Sitemap
Sitemaps of selected pages
Section index (page content marked for section menus)
Recently updated pages
Related pages (based on keywords)
Menu block title

General Changes

RECORD TYPE ICONS

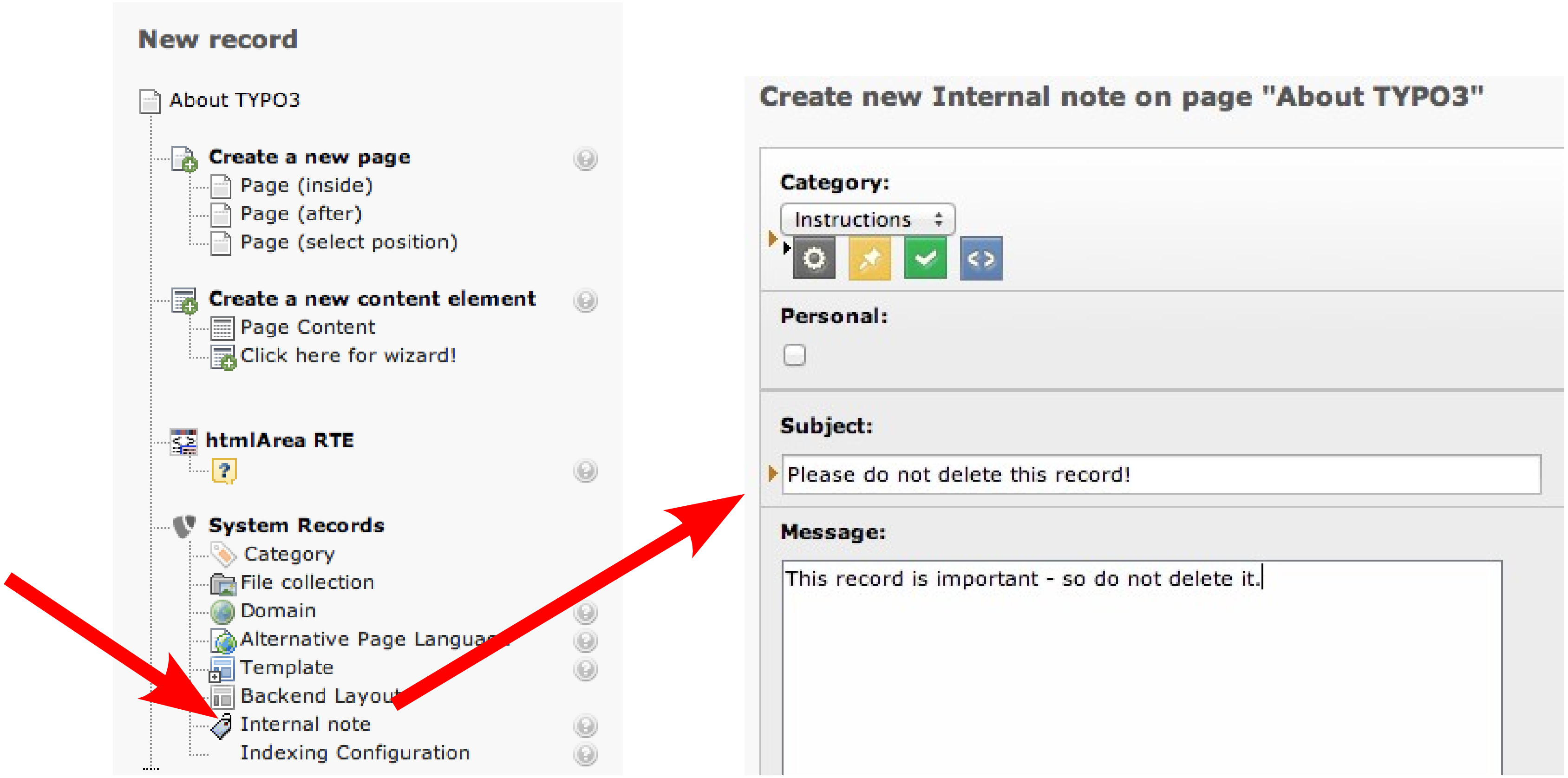
- Icons for record types at TCA type "group=db" are clickable now and act as a filter in Element Browser



General Changes

INTERNAL NOTES

- Visual appearance of “sys notes” re-developed (WEB → List → Create new record → internal note)



New record

About TYPO3

- Create a new page
  - Page (inside)
  - Page (after)
  - Page (select position)
- Create a new content element
  - Page Content
  - Click here for wizard!
- htmlArea RTE
  - ?
- System Records
  - Category
  - File collection
  - Domain
  - Alternative Page Language
  - Template
  - Backend Layout
  - Internal note
  - Indexing Configuration

Create new Internal note on page "About TYPO3"

Category:

Instructions

Personal:

□

Subject:

Please do not delete this record!

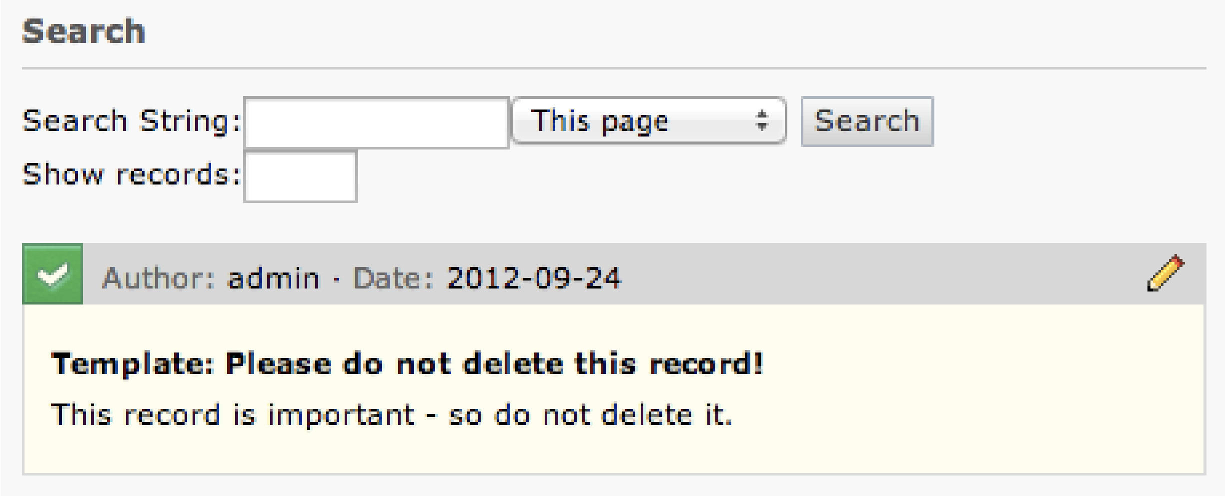
Message:

This record is important - so do not delete it.

General Changes

INTERNAL NOTES

- Visual appearance of “sys notes” re-developed (WEB → List → Create new record → internal note)



✓ Author: admin · Date: 2012-09-24

Template: Please do not delete this record!

This record is important - so do not delete it.

General Changes

MISCELLANEOUS

- cObject FORM extended by PostProcessors
- PostProcessors have to implement

  `tx_form_System_Postprocessor_Interface`

  (therefore, can be loaded via TypoScript)
- For further details see FORM Wizard manual (section “Postprocessors”):

  `typo3conf/sysext/form/Documentation/en/manual.sxw`

General Changes

MISCELLANEOUS

- List Module: click on title to edit record
- Doctype is HTML5 by default

```
<!DOCTYPE html>
```

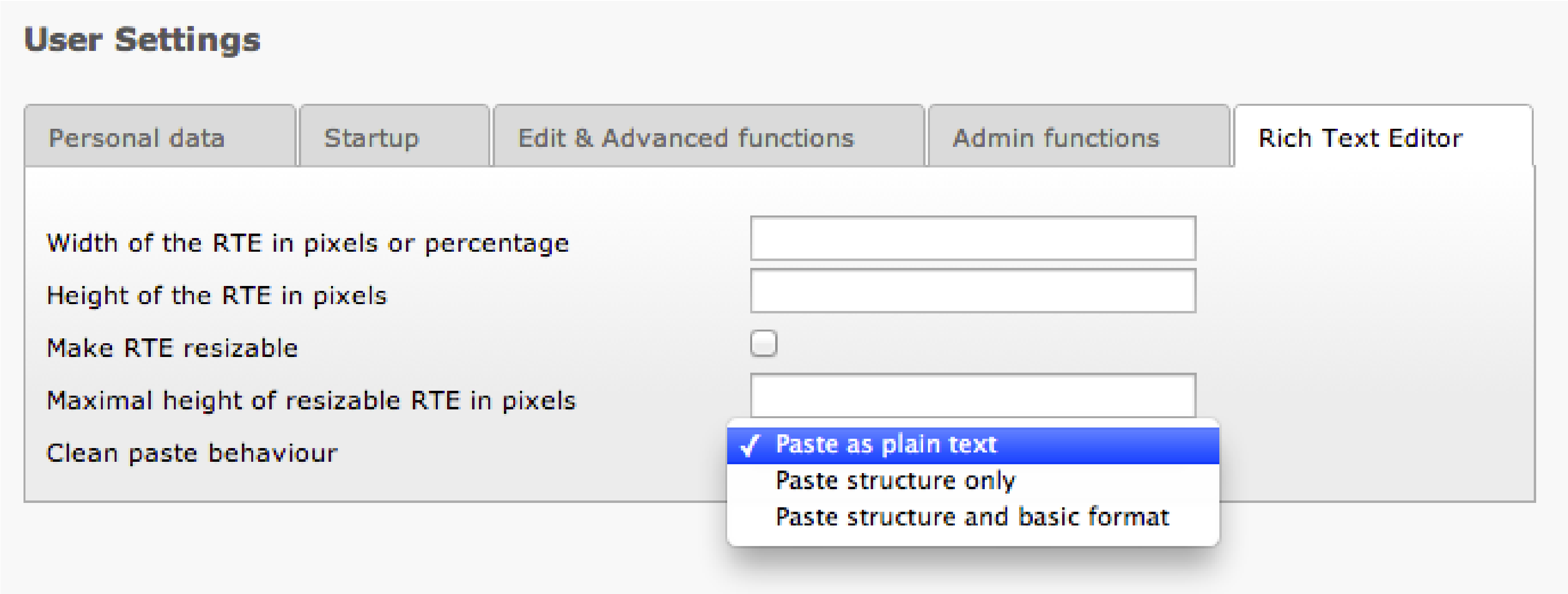
Chapter 5

Rich Text Editor (RTE)

Rich Text Editor (RTE)

- Paste content from clipboard preserves the following (HTML5) tags, if paste behaviour "Paste structure only" or "Paste structure and basic format" has been selected:

```
article, aside, footer, header, nav, section
```



User Settings

Width of the RTE in pixels or percentage

Height of the RTE in pixels

Make RTE resizable □

Maximal height of resizable RTE in pixels

Clean paste behaviour

Rich Text Editor (RTE)

- Paste content from clipboard preserves the following (HTML5) tags, if paste behaviour “Paste structure only” or “Paste structure and basic format” has been selected:

  ```
  article, aside, footer, header, nav, section
  ```

- Customisable with PageTSconfig:

  ```
  buttons.pastebehaviour.pasteStructure.keepTags
  ```

  ```
  buttons.pastebehaviour.pasteFormat.keepTags
  ```

Chapter 6

TypoScript & TSconfig

TypoScript & TSconfig

MULTIPLE VALUES IN CONDITIONS

- Pipe symbol “|” allows multiple values in conditions
- For example:

```
[globalVar = TSFE:id = 10|12|15]
```

(is true, if page ID is 10 or 12 or 15)

```
[globalVar = TSFE:id != 10|12|15]
```

(is true, if page ID is not 10 and not 12 and not 15)

CHECK IF NULL

- Two new functions `ifNull` and `isNull` to check if a value is NULL
- For example:

```
10 = TEXT
10 {
   field = description
   stdWrap.ifNull = no description available
}

10 = TEXT
10 {
   if.isNull.field = description
   value = no description available
}
```

COLUMN SELECTION IN SECTIONINDEX

- Property sectionIndex of the HMENU object supports two new features:
  - Specific column can be addressed with `useColPos`

    ```
    tt_content.menu.20.3.1.sectionIndex.useColPos = <x>
    ```

    <x> is the column, e.g. 0 for “normal” or -1 for all columns
  - stdWrap can be used as well

TypoScript & TSconfig

JQUERY (EXPERIMENTAL!)

- TYPO3 CMS v6.0.0 shipped with jQuery version 1.8.2

  ```
  typo3/contrib/jquery/
  ```

- Add jQuery to frontend by TypoScript setup, e.g.:

  ```
  page.javascriptLibs {
    jQuery = 1
    jQuery {
      version = 1.8.2
      source = local
      noConflict = 1
      noConflict.namespace = test
    }
  }
  ```

- “source” can be “local” or CDN: msn, google, jquery

TypoScript & TSconfig

USER CONTENT OBJECTS

- cObjects USER and USER_INT support stdWrap now
- For example:

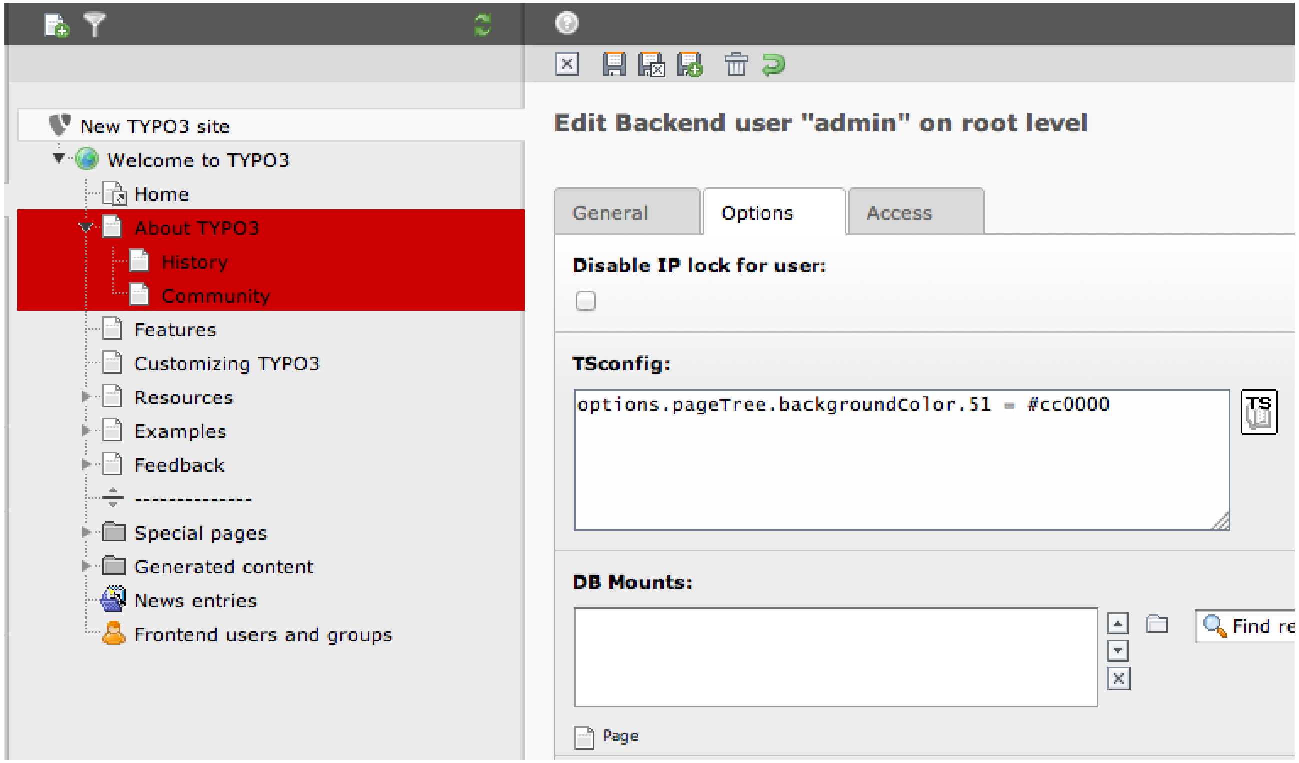
```
20 = USER
20 {
  userFunc = tx_cssstyledcontent_pi1->renderSpace
  space = before
  constant = {$content.spaceBefore}
  stdWrap {
    noTrimWrap = |csc-space-before-| |
  }
}
```

TypoScript & TSconfig

COLOURED PAGE TREE

- UserTSconfig can be used to highlight pages in the page tree:

```
options.pageTree.backgroundColor.51 = #cc0000
```



Edit Backend user "admin" on root level

Disable IP lock for user:

□

TSconfig:

```
options.pageTree.backgroundColor.51 = #cc0000
```

DB Mounts:

TypoScript & TSconfig

MISCELLANEOUS

- Following attribute removed from links:

  `onfocus=”blurLink(this);”`

- Therefore, option `noBlur` became irrelevant and was removed

Chapter 7

Namespaces

Namespaces

- TYPO3 CMS core uses PHP namespaces (PHP >= 5.3.0)
  - http://php.net/language.namespaces.php
- Files divided into three system extension folders:
  - core `typo3/sysext/core/`
    (e.g. bootstrap, logging functions, mail- and cache handling)
  - backend `typo3/sysext/backend/`
    (e.g. TCEmain, forms, modules)
  - frontend `typo3/sysext/frontend/`
    (e.g. TypoScript and rendering)
- Folder `Classes/` contains class files by purpose

Namespaces

- Access classes, functions and constants, e.g.:
  - File `Writer.php` in directory:

    ```
    typo3/sysext/core/Classes/Log/Writer/
    ```

    Access:

    ```
    TYPO3\CMS\Core\Log\Writer\Writer
    ```

- Namespace declaration at top of every file
  - For example:

    ```
    <?php
    namespace TYPO3\CMS\Core\Log;
    ```

Namespaces

- Mapping information for Autoloader in file:

```
typo3/sysext/core/Migrations/Code/ClassAliasMapXXX.php
```

```
<?php
return array(
    'Tx_About_Controller_AboutController' =>
    'TYPO3\\CMS\\About\\Controller\\AboutController',
    ...
);
```

- Extensions may have their own ClassAliasMap
  - Continue using old class name
  - Mapping to new class name works PHP internal
  - Useful for example for TypeHints

Namespaces

- Syntax of class names with namespaces:

  `{VendorName}\{PackageName}\({CategoryName}\)*{ClassName}`

- TYPO3 Flow Coding Guidelines define:
  namespaces, classes, interfaces, exceptions, methods, variables, constants and file names

- Namespace vendor name:
  - TYPO3 CMS core uses **`\TYPO3\CMS`** as vendor name
  - Vendor name consists of one or two elements (parts)
  - Vendor name must be unique

Namespaces

EXTENSION DEVELOPERS

- Do not use **`\TYPO3\CMS`** as your vendor name (reserved by TYPO3 CMS core)
- Choose your own, unique vendor name (e.g. company name)
- Vendor name must consist of one element only
- Registration/reservation of vendor names is not possible and not planned yet

Namespaces

EXTENSION DEVELOPERS

- Next element after vendor name is extension key
- Extension key as UpperCamelCase
  (transformed to lower_case_with_underscores internally)

  Note: It is not possible to load two extensions with the namespaces “\Enet\Shop” and “\Dkd\Shop”, because they would both exist in the same directory “shop”
- Further elements in the namespace notation should describe a category (optional)

Namespaces

EXTENSION DEVELOPERS

- When using class names in strings:
  - Escape backslash if inside a double-quoted string (best practise: in single-quoted strings as well)
  - Remove leading slash

```
$configurationManager = $objectManager->get(
'TYPO3\\CMS\\Extbase\\Configuration\\ConfigurationManagerInterface');
```

- Append vendor name at Extbase BE modules

```
\TYPO3\CMS\Extbase\Utility\ExtensionUtility::registerModule(
'VendorName.' . $_EXTKEY, ... );
```

Namespaces

EXTENSION DEVELOPERS

- Use Autoloader rather than include() or require()

  ```
  typo3conf/ext/extkey/ext_autoload.php
  ```

- If extension complies with the Extbase naming scheme, even `ext_autoload.php` is not required:

  ```
  \Tx\ExtName\Foo\Bar
  ```

  Class will be found if it is located in file:

  ```
  ExtName/Classes/Foo/Bar.php
  ```

Logging API

Logging API

- Consolidates logging functionality by providing the following main components/services:
  - **Logger**

    Receives log message, including details such as severity
  - **Writer(s)**

    Passes log entries to log system
    (e.g. file, database, rsyslog server, etc.)
  - **Processor(s)**

    Adds further details to log entry
  - Log system configuration
- However, the Logging API is not used by the core yet

Logging API

EXAMPLE USAGE OF LOGGING API

```
<?php
/** @var $logger \TYPO3\CMS\Core\Log\Logger */
$loggerInstance = \TYPO3\CMS\Core\Utility\GeneralUtility::makeInstance(
'TYPO3\\CMS\\Core\\Log\\LogManager');
$logger = $loggerInstance->getLogger(__CLASS__);
// logging
$logger->info('everything went fine, phew');
$logger->warning('A warning!');
// additional information
$logger->error(
  'This was not a good idea',
  array(
    'param1' => $param1,
    'param2' => $param2,
  )
);
// main methode is log(), other are abbreviations only
$logger->log(TYPO3\CMS\Core\Log\LogLevel::WARNING, 'Another warning');
```

Logging API

METHOD LOG()

```
/**
 * Adds a log record.
 *
 * @param integer $level Log level.
 * @param string $message Log message.
 * @param array $data Additional data to log
 * @return mixed
 */
public function log($level, $message, array $data = array()) {
  ...
}
```

LOG LEVELS AVAILABLE

```
TYPO3\CMS\Core\Log\LogLevel::EMERGENCY    TYPO3\CMS\Core\Log\LogLevel::WARNING
TYPO3\CMS\Core\Log\LogLevel::ALERT        TYPO3\CMS\Core\Log\LogLevel::NOTICE
TYPO3\CMS\Core\Log\LogLevel::CRITICAL     TYPO3\CMS\Core\Log\LogLevel::INFO
TYPO3\CMS\Core\Log\LogLevel::ERROR        TYPO3\CMS\Core\Log\LogLevel::DEBUG
```

Chapter 9

API
(Application Programming Interface)

API

- Method to “flatten” multi-dimensional arrays

  ```
  \TYPO3\CMS\Core\Utility\GeneralUtility::flatten(array $array, $prefix = '')
  ```

- For example, before:

  ```
  array('first.' => array('second' => 1));
  ```

  after:

  ```
  array('first.second' => 1);
  ```

- Feature was implemented with #39951
  http://forge.typo3.org/issues/39951

API

- Methods to return/modify/set a value in an array

```
\TYPO3\CMS\Core\Utility\GeneralUtility::getValueByPath(
    array $array, $path, $delimiter = '/')

\TYPO3\CMS\Core\Utility\GeneralUtility::setValueByPath(
    array $array, $path, $value, $delimiter = '/')
```

- For example:

```
$array = array(
    'foo' => array(
        'bar' => array(
            'baz' => 42
        )
    )
);

$value = \TYPO3\CMS\Core\Utility\GeneralUtility::getValueByPath(
    $array, 'foo/bar/baz');

// $value = 42
```

API

- Method retrieves label of TCA field in the backend

```
\TYPO3\CMS\Backend\Utility\BackendUtility::getLabelFromItemList(...)
```

- Up to now, following TSconfig was ignored

```
TCEFORM.<table>.<field>.addItems.<key> = New value or
TCEFORM.<table>.<field>.altLabels.<key> = Change me
```

- Feature was implemented with #39327
  http://forge.typo3.org/issues/39327

API

- Method to check if a value is an integer and in a certain range (min/max)

```
\TYPO3\CMS\Core\Utility\MathUtility::isIntegerInRange(
$value, $minimum, $maximum)
```

- Feature was implemented with #39739
  http://forge.typo3.org/issues/39739

API

- Method to call user functions supports Closures now

  ```
  \TYPO3\CMS\Core\Utility\GeneralUtility::callUserFunction(...)
  ```

- Read more about the “Closure class” in PHP manual
  http://php.net/class.closure.php
- Feature was implemented with #36784
  http://forge.typo3.org/issues/36784

API

- Caching Framework has been updated
  (to corresponding TYPO3 Flow version)
- Main changes:
  - New interface **TaggableBackendInterface**
  - New **SimpleFileBackend**
  - New **Freezable Cache Backend**
  - (plus bug fixes)
- Feature was implemented with #39439
  http://forge.typo3.org/issues/39439

Chapter 10

Internal Changes

Internal Changes

BOOTSTRAP

- (Re-)written from scratch
- File index.php

```
...
require 'typo3/sysext/core/Classes/Core/Bootstrap.php';
\TYPO3\CMS\Core\Core\Bootstrap::getInstance()->baseSetup('');
require(PATH_tslib . 'index_ts.php');
```

Internal Changes

BOOTSTRAP

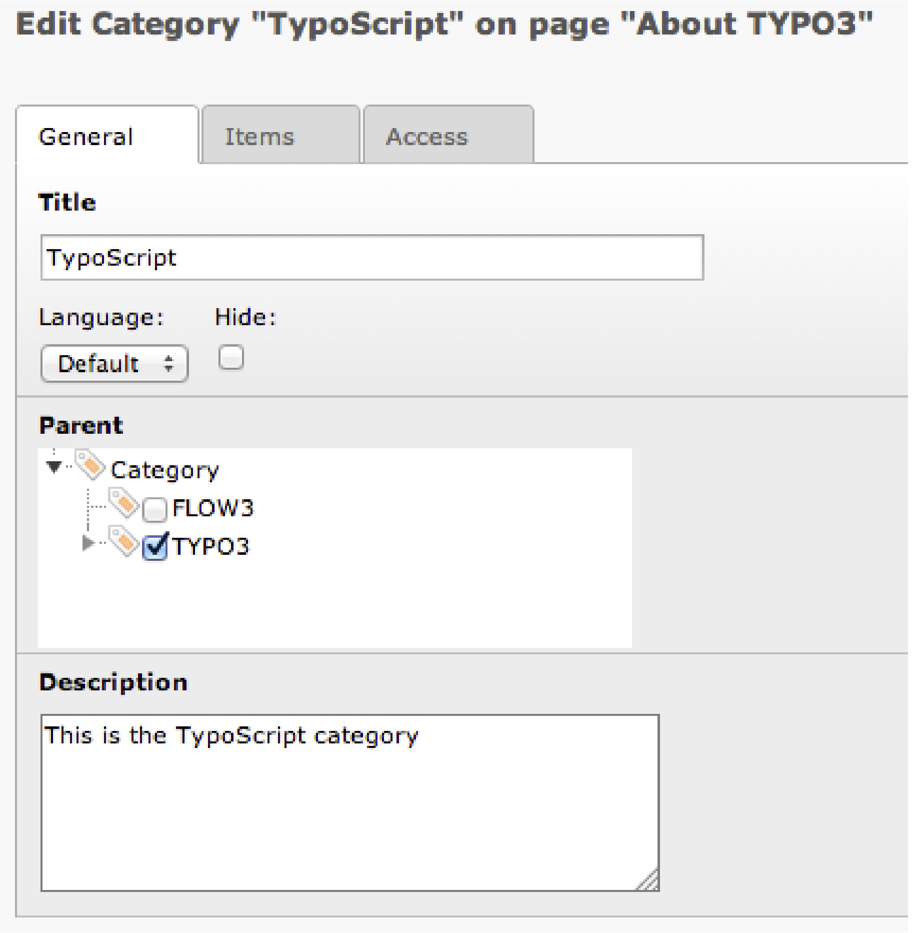
- File typo3/sysext/cms/tslib/index_ts.php

```
...
\TYPO3\CMS\Core\Core\Bootstrap::getInstance()
    ->registerExtDirectComponents()
    ->populateLocalConfiguration()
    ->initializeCachingFramework()
    ->registerAutoloader()
    ->checkUtf8DatabaseSettingsOrDie()
    ->transferDeprecatedCurlSettings()
    ->setCacheHashOptions()
    ->enforceCorrectProxyAuthScheme()
    ->setDefaultTimezone()
    ->initializeL10nLocales()
    ...
```

Internal Changes

CATEGORY API

- System-wide generic categories
- Accessible by all extensions
- Create categories as system records
- Category API is not used by the TYPO3 core yet



Edit Category "TypoScript" on page "About TYPO3"

Title

TypoScript

Language: Default

Hide: □

Parent

- Category
  - □ FLOW3
  - ☑ TYPO3

Description

This is the TypoScript category

Internal Changes

CATEGORY API

- Relevant database tables:
  - sys_category
  - sys_category_record_mm
- Coding example for extension developers:

```
\TYPO3\CMS\Core\Extension\ExtensionManager::makeCategorizable(
    $extensionKey,
    $tableName,
    $fieldName = 'categories',
    $options = array()
);
```

Internal Changes

PAGE MODULE

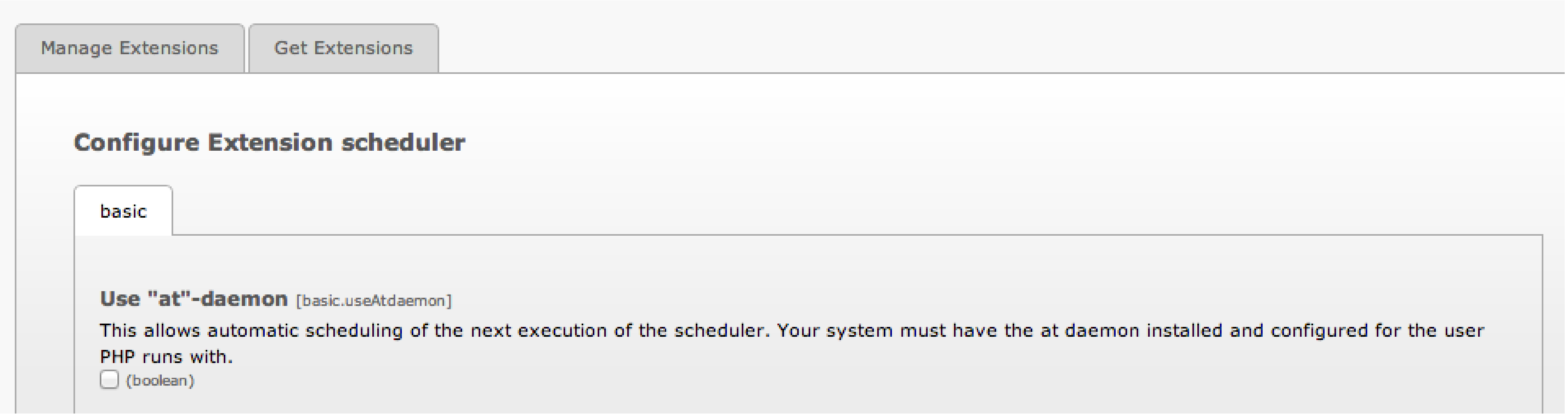
- Based on a default backend layout
  (rather than mod.SHARED.colPos_list configuration)

```
backend_layout {
    colCount = 4
    rowCount = 1
    rows {
        1.columns {
            1 {
                name = LLL:EXT:cms/locallang_ttc.xlf:colPos.I.0
                colPos = 1
            }
            2 {
                name = LLL:EXT:cms/locallang_ttc.xlf:colPos.I.1
                ColPos = 0
                ...
```

Internal Changes

SCHEDULER “AT” DAEMON

- Trigger Scheduler once via “at” daemon
  (instead of executing the Scheduler periodically as a cronjob)
- Useful if crontab is not available, but “at” (atd)
- Activate feature in extension configuration



Configure Extension scheduler

Use "at"-daemon [basic.useAtdaemon]
This allows automatic scheduling of the next execution of the scheduler. Your system must have the at daemon installed and configured for the user PHP runs with.
□ (boolean)

Internal Changes

SCHEDULER COMMAND LINE

- Trigger a specific Scheduler task via command line

  ```
  /typo3/cli_dispatch.phpsh scheduler -i <uid>
  ```

  where <uid> is the ID of the task
- Additional parameter –f (force) also executes deactivated tasks
- CLI scripts in the core can be replaced by Tasks now

Internal Changes

DATA TYPE “TINYINT” TO “INT”

- Data types changed from “tinyint” (0 to 255) to “int” (0 to 4,294,967,295) to allow a wider range of values
  - Useful for large websites
  - Useful for storing unique values (similar to Extbase exception codes which use the UNIX timestamp)

Internal Changes

DATA TYPE “TINYINT” TO “INT”

- Affected database tables/fields:
  - pages.doktype
  - pages_language_overlay.doktype
  - pages.layout
  - pages_language_overlay.layout
  - tt_content.section_frame
  - tt_content.image_frames
  - pages.snapshot (new in TYPO3 CMS 6.0)
  - pages_language_overlay.cols (new in TYPO3 CMS 6.0)
  - pages_language_overlay.colPos (new in TYPO3 CMS 6.0)
  - pages_language_overlay.table_bgColor (new in TYPO3 CMS 6.0)

Internal Changes

STORING NULL VALUES

- TCA allows storing NULL values now
  (in the past: empty string or numeric zero only)

```
'columns' => array(
   'title' => array(
      'config' => array(
         'type' => 'text',
         'eval' => 'null',
      )
   )
)
```

- Required for checks with FAL:
  value is empty or inherited (in this case: NULL)

Internal Changes

TCA TYPE GROUP/INLINE: FILTER

- New property `filter = array()` for:

  `['columns'][field name]['config'] / TYPE: "group" / "inline"`

- Useful to limit options to certain foreign records
- Data sets are filtered in Element Browser and when TCEMain processes them
- UserFunc receives two parameters:
  - `$parameters`
  - `$parentObject`

Internal Changes

TCA TYPE GROUP/INLINE: FILTER

```
'mother' => array (
    'label' => 'Mother',
    'config' => array (
        'type' => 'group',
        'internal_type' => 'db',
        'allowed' => 'tx_myext_person',
        'size' => 1,

        'filter' => array (
            'userFunc' =>
                'EXT:myext/class.tx_myext_filter.php:tx_myext_filter->doFilter',
            'parameters' => array(
                'evaluateGender' => 'female',
            ),
        ),
    ),
)
```

TCA TYPE GROUP/INLINE: FILTER

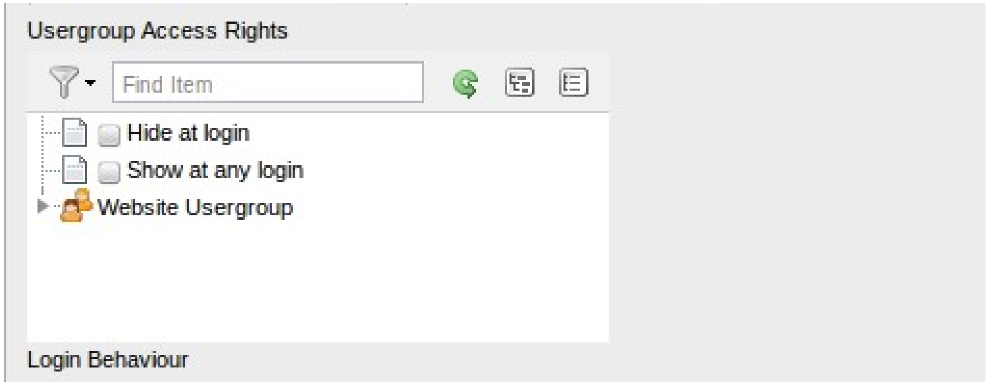
```
class tx_myext_filter {
    public function doFilter(array $parameters, $parentObject) {
        $fieldValues = $parameters['values'];

        // filter data ...
        ...

        return $fieldValues;
    }
}
```

Internal Changes

WIDTH OF TCA TREE

- TCA tree width is configurable now

```
['TCA']['pages']...['config']['treeConfig']['appearance']['width']
```



Usergroup Access Rights

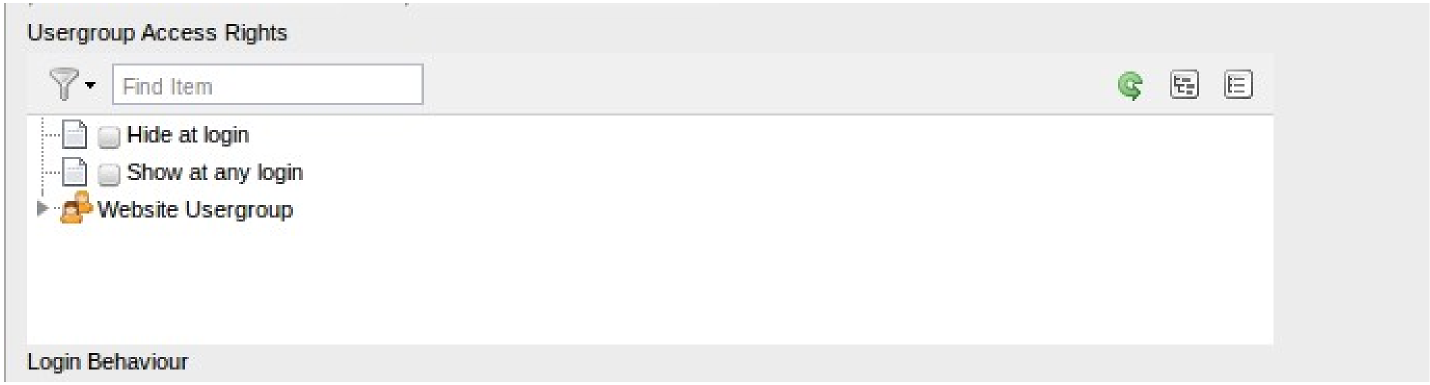
□ Hide at login

□ Show at any login

Website Usergroup

Login Behaviour

(before)



Usergroup Access Rights

□ Hide at login

□ Show at any login

Website Usergroup

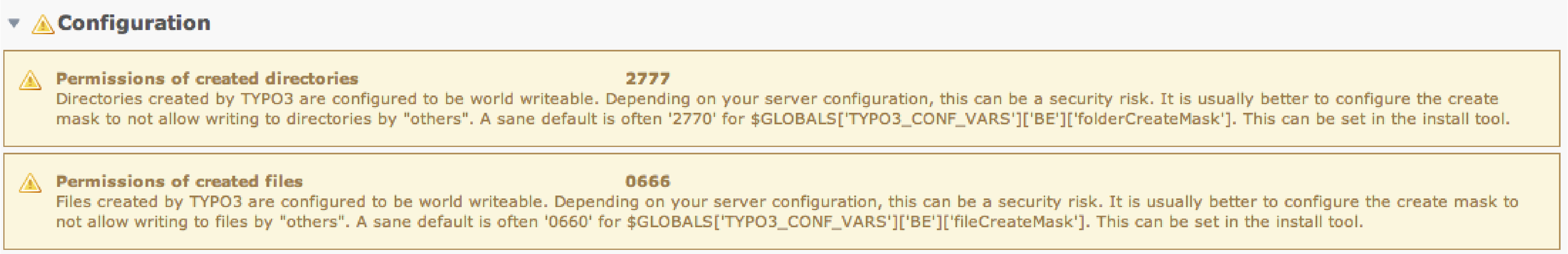
Login Behaviour

(now)

Internal Changes

UMASK WARNINGS

- Reports Module warns about insecure directory/file permissions
  (e.g. “2777” enables write access for directories to everyone)
- Example: Introduction Package
  creates directories with 2777 and files with 0666



▾ ⚠ **Configuration**

⚠ **Permissions of created directories** **2777**
Directories created by TYPO3 are configured to be world writeable. Depending on your server configuration, this can be a security risk. It is usually better to configure the create mask to not allow writing to directories by "others". A sane default is often '2770' for $GLOBALS['TYPO3_CONF_VARS']['BE']['folderCreateMask']. This can be set in the install tool.

⚠ **Permissions of created files** **0666**
Files created by TYPO3 are configured to be world writeable. Depending on your server configuration, this can be a security risk. It is usually better to configure the create mask to not allow writing to files by "others". A sane default is often '0660' for $GLOBALS['TYPO3_CONF_VARS']['BE']['fileCreateMask']. This can be set in the install tool.

Internal Changes

NATIVE DATE/TIME FIELDS

- Date/time values are stored as UNIX timestamp in the database by default
- Overwrite the default with “date” or “datetime”

```
'my_native_date' => array(
    'label' => 'My native date',
    'config' => array(
        'dbType' => 'date',    // valid values: 'date' or 'datetime'
        'type' => 'input',
        'size' => '8',
        'max' => '20',
        'eval' => 'date',
        ...
    )
)
```

Internal Changes

TCA: READ ONLY

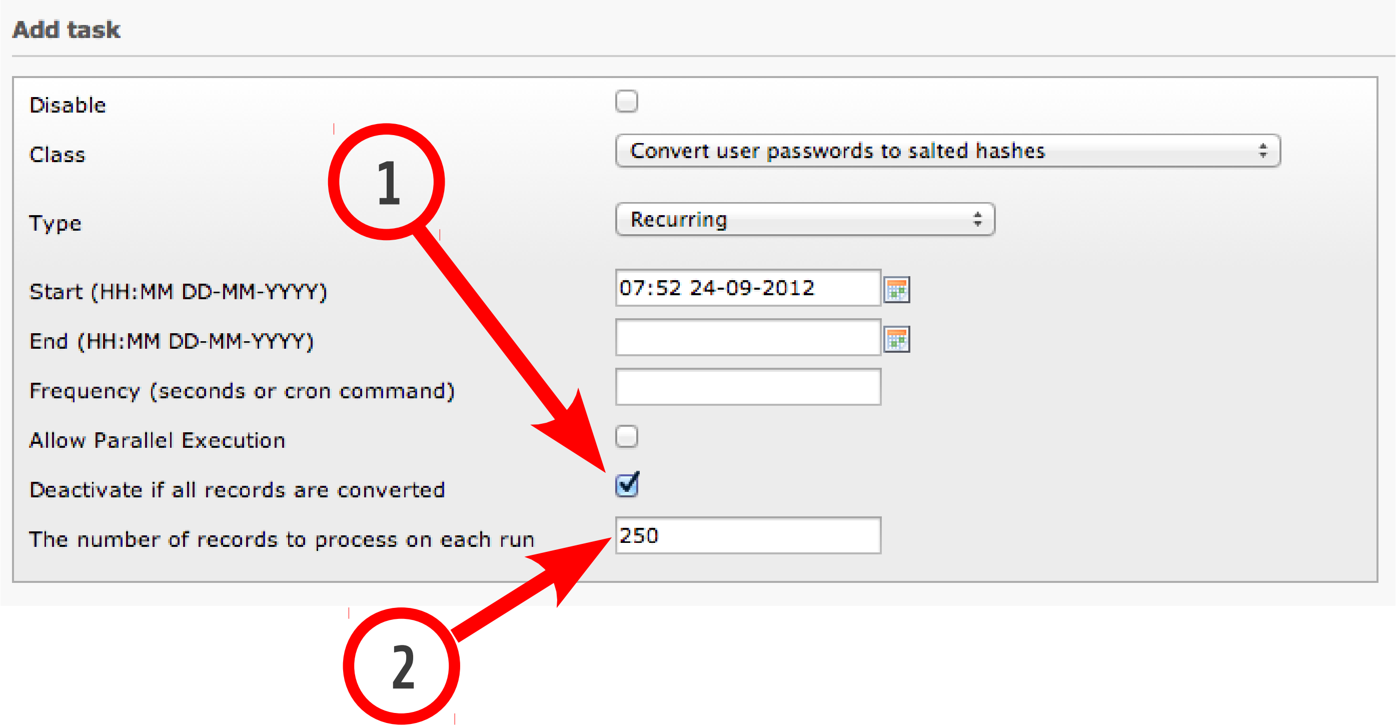
- Some TCA types can be set to “read only”
- Prevents modification of values in the backend
- TCA types: input, text, select, group and inline
- Configurable in PageTSconfig:

```
TCEFORM.[table].[field].config.readOnly = 1
```

Internal Changes

SCHEDULER: SALTED HASHES

- Task “Convert user passwords to salted hashes”
  - Deactivate task if all records are converted (1)
  - Number of records to process on each run (2)



Add task

Disable	□
Class	Convert user passwords to salted hashes
Type	Recurring
Start (HH:MM DD-MM-YYYY)	07:52 24-09-2012
End (HH:MM DD-MM-YYYY)	
Frequency (seconds or cron command)	
Allow Parallel Execution	□
Deactivate if all records are converted	☑
The number of records to process on each run	250

Internal Changes

XCLASS

- New method to implement XCLASSes:

```
// in file “ext_autoload.php”:
$extensionPath =
    \TYPO3\CMS\Core\Extension\ExtensionManager::extPath('my_extension');
return array(
    'ux_t3lib_userauth' =>
        $extensionPath . 'xclasses/class.ux_t3lib_userauth.php',
);
```

- Instructs Autoloader to search for a XCLASS named “t3lib_userauth” in file

```
path-to-my-extension/xclasses/class.ux_t3lib_userauth.php
```

(Note: use hooks or signal/slots instead of XCLASS, if possible)

Internal Changes

XCLASS

- Before, implementation of XCLASS by:
  - Adding XCLASS statement in every file that should/can be extended
  - Adding XCLASS statement to ext_localconf.php of extension
- Additional logic since TYPO3 CMS 6.0:
  - If Autoloader detects a class `ux_classname`, this class will be extended
  - makeInstance() checks for `ux_classname` as well

    (if ux_ does not exist, Autoloader caches this information, which causes a performance boost)

(Note: use hooks or signal/slots instead of XCLASS, if possible)

Internal Changes

MISCELLANEOUS

- Backend login:
  - Failed login attempts are logged as level “1” (warning) instead of level “0” (info) now
  - New classes for login popup: “error” and “refresh”
- TCA Suggest Wizard before searched in fields “label” and “label_alt” only. Additional fields can included by option `additionalSearchFields` now

Internal Changes

MISCELLANEOUS

- Cache related changes:
  - Cache files are stored in `typo3temp/Cache/` now (before: `typo3conf/temp_CACHED_xxx.php`)
  - Configuration became irrelevant and has been removed: `$TYPO3_CONF_VARS['SYS']['extCache']`
  - Caching-Backend “wincache” available (Windows only)

Internal Changes

MISCELLANEOUS

- Bootstrap related changes:
  - Access global variables in files `ext_tables.php` and `ext_localconf.php` by using: `$GLOBALS['TCA']`
  - PHP directive `register_globals` must be `off` (or bootstrap process fails)
  - All Bootstrap related cache files are stored in `typo3temp/Cache/Code/cache_core` now (and can be deleted easily if necessary)

Internal Changes

MISCELLANEOUS

- System extension “form”:
  - Custom styles are supported now

    `plugin.tx_form._CSS_DEFAULT_STYLE`
  - Also implemented: `config.removeDefaultCss`
- IRRE fields can be used in FlexForms now
- String lengths in column `CType` in database table `tt_content` up to 255 characters now
  (was 30 characters in the past)

Internal Changes

MISCELLANEOUS

- Class name prefix policy simplified:
  - Prefix must consist of at least 2 characters
  - Prefix must not be `Core`
  - Before: `tx_`, `TX_`, `user_`, `User_`, `t3lib_`
  - Removed: `[sys][additionalAllowedClassPrefixes]`

Internal Changes

MISCELLANEOUS

- Extension icon can be a PNG image now (`ext_icon.gif` or `ext_icon.png`)
- These things have been removed:
  - Variable `$GLOBALS['TYPO_VERSION']`
  - Method `t3lib_div::intInRange()`
  - TypoScript options: `hover, hoverStyle, noLinkUnderline, smallFormFields, minifyJS, minifyCSS`
  - TypoScript cObjects `PHP_SCRIPT` and `PHP_SCRIPT_INT`

Chapter 11

Extbase & Fluid

Extbase & Fluid

ENABLE FIELDS

- In earlier versions of TYPO3, when reading data from repository, Extbase returned either:
  - All records, which are not hidden, not deleted and between start/stop time stamp, or:
  - All records (including deleted)
    `$querySettings->setEnableFields(FALSE)`
- New options since TYPO3 CMS 6.0:
  - `setIgnoreEnableFields`

    TRUE: ignore all “enable fields”. If `enableFieldsToBeIgnored` is set in addition, then these fields are ignored only.

    FALSE: include all “enable fields”, independent of `enableFieldsToBeIgnored`

Extbase & Fluid

ENABLE FIELDS

- New options since TYPO3 CMS 6.0:
  - `setEnableFieldsToBeIgnored`

    Sets an array of "enable fields", which are to be ignored. The should be defined in: `$GLOBALS['TCA'][$table]['ctrl']['enablecolumns']`
  - `setIncludeDeleted`

    This flag controls if deleted records should be included (TRUE) or not (FALSE)
- New TypoScript option:
  - `ignoreAllEnableFieldsInBe`

    Controls if "enable fields" should be ignored in backend

    ```
    config.tx_extbase.features.ignoreAllEnableFieldsInBe = 1
    ```

Extbase & Fluid

EXTBASE AND FAL

- Models for File Abstraction Layer (FAL) objects:
  - File
  - FileReference
  - Folder
  - FolderBasedFileCollection
  - StaticFileCollection

- In addition, Type Converters are available

  This feature is explicitly marked as experimental and subject to change!

Extbase & Fluid

MISCELLANEOUS

- Models have been implemented for:
  - Backend User

    `Classes/Domain/Model/BackendUser.php`
  - Backend User Group

    `Classes/Domain/Model/BackendUserGroup.php`
  - Filemounts

    `Classes/Domain/Model/FileMount.php`
  - Categories

    `Classes/Domain/Model/Category.php`
- Models, including repositories

Extbase & Fluid

MISCELLANEOUS

- Bootstrap can be overwritten by Dependency Injection (DI): `Tx_Extbase_Core_Bootstrap`
- Persistence Layer uses caching → performance boost

FLUID VIEWHELPER: FORMAT.CURRENCY

- ViewHelper “format.currency” supports two new arguments:
  - prependCurrency

    Controls if currency sign should be positioned left of the figure
  - separateCurrency

    Controls if a space should be placed between currency sign and figure
- For example (output: $54,321.00):

```
<f:format.currency currencySign="$" decimalSeparator="."
    thousandsSeparator="," prependCurrency="TRUE"
    separateCurrency="FALSE">54321</f:format.currency>
```

FLUID VIEWHELPER: TRANSLATE

- ViewHelper “translate” allows you to specify an extension to get the language label from
  - key: 'someKey'

    Specifies the key/value pair (based on the language configured for the frontend)
  - extensionName: 'SomeExtensionName'

    Specifies the extension (UpperCamelCase) and uses the locallang file of extension “some_extension_name”
- For example:

```
{f:translate(key: 'someKey', extensionName: 'SomeExtensionName')}
```

Extbase & Fluid

FLUID VIEWHELPER: GROUPEDFOR

- ViewHelper “groupedFor” allows you to specify a PropertyPath at argument “groupBy”

  (before: a property only)

Extbase & Fluid

MISCELLANEOUS

- All tag-based ViewHelpers support an optional default value now

```
function registerTagAttribute(
    $name, $type, $description, $required = FALSE, $default = NULL) {
    ...
}
```

- Extbase and Fluid are mandatory in TYPO3 CMS
  - Are always loaded
  - Can not be deinstalled
- Language labels of widget “paginate” are not longer hard-coded (`Resources/Private/Language/locallang.xlf`)

Chapter 12

Hooks

(Hooks, Signals and Slots)

Hooks

- The following new Signal allows the customisation of the backend login form:

```
/**
 * Emits the render login form signal
 *
 * @param array $markers Array with markers for the login form
 * @return void
 */
protected function emitRenderLoginFormSignal(array &$markers) {
    $this->getSignalSlotDispatcher()->dispatch(
        'TYPO3\\CMS\\Backend\\Controller\\LoginController',
        self::SIGNAL_RenderLoginForm,
        array($this, $markers)
    );
}
```

Hooks

- If File Abstraction Layer (FAL) is used, files can be stored at a remote storage (e.g. WebDAV, Amazon S3, etc.). In this case, the private URL must not be revealed (may contain sensitive information).
- The generation of the public URL can be controlled with the following Signal/Slot:

```
$this->getSignalSlotDispatcher()->connect(
    '\TYPO3\CMS\Core\Resource\ResourceStorage',
    \TYPO3\CMS\Core\Resource\ResourceStorage::SIGNAL_PreGeneratePublicUrl,
    'Tx_MyExtension_HandlerSlot',
    'preGeneratePublicUrl'
);
```

Hooks

- If an external cache system is used (e.g. nc_staticfilecache), an additional internal caching is usually not necessary.
- The following hook excludes a specific page from the cache:

```
['SC_OPTIONS']['tslib/class.tslib_fe.php']['usePageCache']
$usePageCache = $_procObj->usePageCache($this, $usePageCache = TRUE);
```

Hooks

- Hook before pageID has been determined:

```
['SC_OPTIONS']['tslib/class.tslib_fe.php']['determineId-PreProcessing']
```

- Hook after pageID has been determined:

```
['SC_OPTIONS']['tslib/class.tslib_fe.php']['fetchPageId-PostProcessing']
```

- Hook to process login errors (extension: felogin):

```
['EXTCONF']['felogin']['login_error']
```

Chapter 13

Deprecated Functions

Deprecated Functions

- Module “DB Check → Full search” allows backend users to export data as CSV (not XML any more)
- Class t3lib/class.t3lib_xml has been classified as “deprecated” and will be removed in TYPO3 CMS 6.2
- Logging features have been removed:
  - **stat_mysql**

    Logging to the MySQL table sys_stat
  - **stat_apache**

    Logging to a log file (Apache-style)

  Modern web statistic solutions such as Google Analytics or Piwik should be used instead.

Deprecated Functions

- Flag “doNotLoadInFe” was removed

  This flag has been introduced in TYPO3 CMS 4.3 and indicated that an extension does not have any frontend functionality (`ext_emconfig.php`)

- System extension “simulatestatic” was removed

  When updating from an old TYPO3 CMS version to 6.0, the Update Wizard downloads the extension from TER and installs it, if it was installed in the old TYPO3 CMS instance.

- TypoScript option “noBlur” was removed

Deprecated Functions

- Historical data are not deleted automatically

  Database table `sys_history` stores historical data (content and page changes, etc.). TYPO3 CMS does not delete this data any more and you should consider setting up Scheduler task “Garbage Collection”.

- Data compression with jsmin has been removed

  Due to license issues, the default compression of certain Javascript files with the jsmin library has been removed and substituted with a hook.

Chapter 14

Upgrade
(from TYPO3 CMS 4.x to 6.0)

Upgrade

- Official Upgrade Instructions

  http://wiki.typo3.org/Upgrade#Upgrading_to_6.0
- Guide: TYPO3 Installation and Upgrading

  http://typo3.org/documentation/document-library/guides/doc_guide_install/current/
- Check if system meets (new) system requirements (they are not the same as for TYPO3 4.7)
- Check deprecation log in old TYPO3 instance

Upgrade

- TYPO3 CMS 6.0 incompatible extensions
  - Approximately 2200 extensions have been identified to be incompatible with TYPO3 CMS 6.0
    (mainly because of calls to removed functions)

    http://wiki.typo3.org/TYPO3_6.0_Incompatible_Extensions_A
    ...
    http://wiki.typo3.org/TYPO3_6.0_Incompatible_Extensions_Z

  - Migration tips for extension developers:

    http://wiki.typo3.org/TYPO3_6.0_Extension_Migration_Tips

Chapter 15

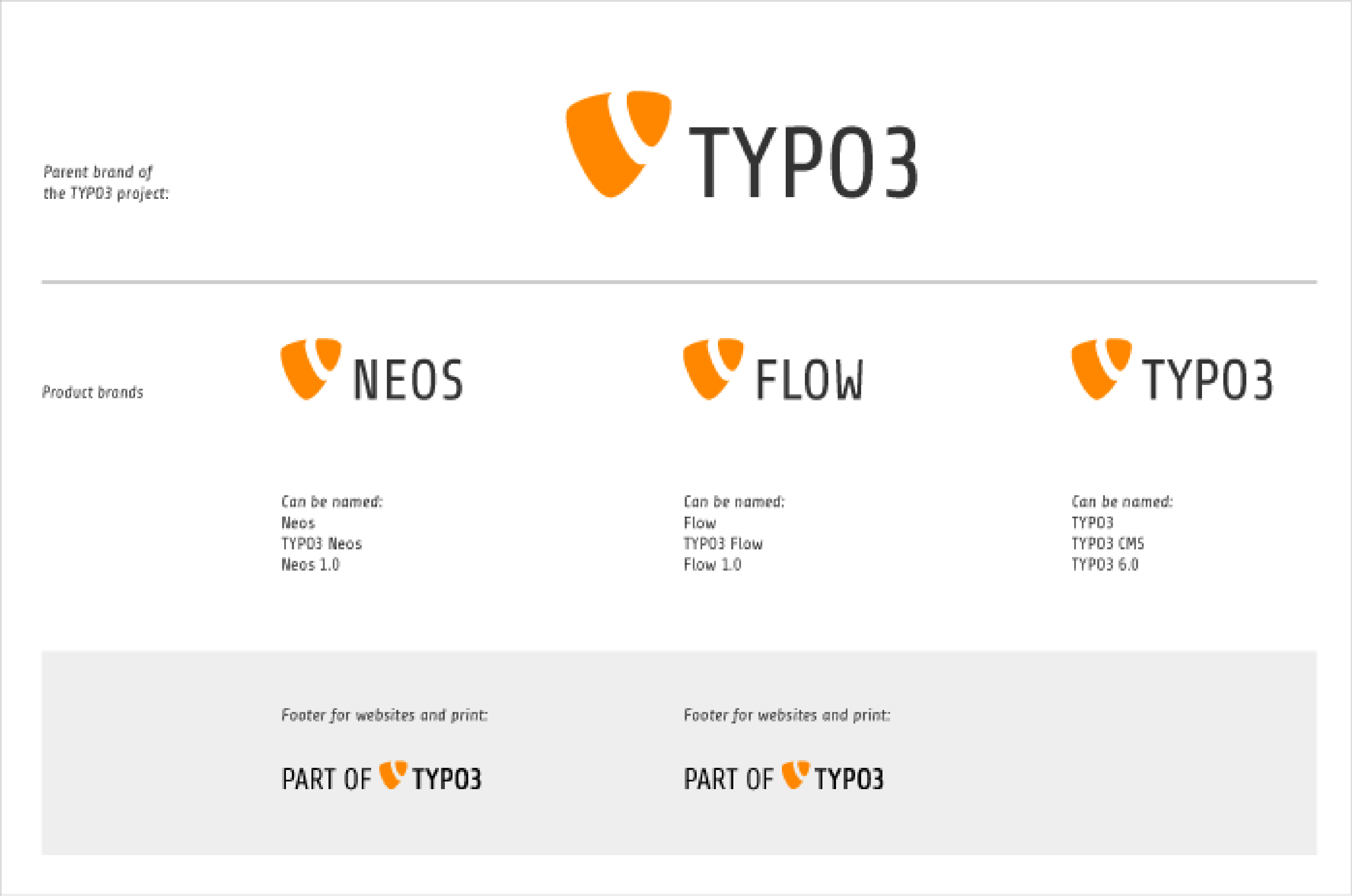
TYPO3 Branding

TYPO3 Branding

- New naming scheme assembles all products under the roof of the TYPO3 project
- All existing and all possible new products will have "TYPO3" in front of their name as a prefix

TYPO3	now:	TYPO3 CMS
FLOW3	now:	TYPO3 Flow
Fluid	now:	TYPO3 Fluid
Extbase	now:	TYPO3 Extbase
Surf	now:	TYPO3 Surf
Phoenix	now:	TYPO3 Neos

TYPO3 Branding



Parent brand of the TYPO3 project:

TYPO3

Product brands

NEOS

FLOW

TYPO3

Can be named:
Neos
TYPO3 Neos
Neos 1.0

Can be named:
Flow
TYPO3 Flow
Flow 1.0

Can be named:
TYPO3
TYPO3 CMS
TYPO3 6.0

Footer for websites and print:

PART OF TYPO3

Footer for websites and print:

PART OF TYPO3

(Source: http://typo3.org/the-brand/a-brand-new-way)

TYPO3 Branding

- TYPO3 logo
  - Shape remains the same
  - Colour use: orange only
    (PANTONE Orange 021C, RGB: 255/135/0, Hex: #FF8700)
  - Logo left of word “TYPO3”

Chapter 16

Sources

Sources

- TYPO3 News
  - http://typo3.org/news
- Release Notes
  - http://typo3.org/download/release-notes/typo3-6-0-release-notes/
  - http://wiki.typo3.org/TYPO3_6.0
- TYPO3 GIT Repository
  - http://git.typo3.org/TYPO3v4/Core.git
  - NEWS.txt
- TYPO3 Bug-/Issuetracker
  - http://forge.typo3.org/projects/typo3v4-core/issues

Sources

- File Abstraction Layer (FAL)
  - http://www.slideshare.net/sritterkh1/the-file-abstraction-layer-in-typo3-60
  - http://preview.docs.typo3.org/TYPO3/FileAbstractionLayerReference/
- TYPO3 Logging API
  - http://forge.typo3.org/projects/extension-t3lib_log
- Namespaces
  - http://php.net/language.namespaces.php
  - http://wiki.typo3.org/Namespaces
- XCLASS and Autoload
  - http://wiki.typo3.org/Autoload

Sources

- List of incompatible extensions
  - http://wiki.typo3.org/TYPO3_6.0_Incompatible_Extensions_A (...Z)
- TYPO3 Branding
  - http://typo3.org/news/article/a-brand-new-way/
  - http://typo3.org/the-brand/the-typo3-family/
  - Keynote speech at T3CON12 by Robert Lemke

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Thank You!

TYPO3 inspires people to share