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# Documentation for EXT:solr the Apache Solr integration for TYPO3

Release 11.2.6 ELTS

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2025-07-28 09:28



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**Extension key** solr

**Package name** apache-solr-for-typo3/solr

**Version** 11.2.6 ELTS

**Language** en

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**Rendered** 2025-07-28 09:28

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A TYPO3 extension that integrates the [Apache Solr](#) Enterprise Search Server into the TYPO3 CMS.

This extension serves as a base module that covers the most frequently used functionalities.

Additional features can be obtained through the following free add-ons:

1. [Apache Tika for TYPO3](#)
2. [Apache Solr for TYPO3 - More Like This](#)
3. [Apache Solr for TYPO3 - Grouping for fluid rendering](#)

and many more by searching for “solr” in the TYPO3 Extension Repository (TER).

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# INTRODUCTION

## 1.1 What does it do?

Apache Solr for TYPO3 is the search engine you were looking for with special features such as **Faceted Search** or **Synonym Support** and an incredibly fast response times of results within milliseconds.

When development started, the primary goal was to create a replacement for Indexed Search. With the initial public release at T3CON09 in Frankfurt, Germany that goal was reached and even passed by adding features which Indexed Search does not support.

With EXT:solr it is simple to build a search for a TYPO3 website, that allows you to index any kind of TYPO3 records with TCA configuration and pages. The results can be rendered with flexible fluid templates, to render the results as you need them.

## 1.2 Feature List

- Faceted Search
- Spellchecking / **Did you mean**
- **Multi Language Support**
- Search word highlighting
- Field Boosting for fine tuning the importance of certain index fields
- **Frontend User Group Access Restrictions Support**
- Stop word Support
- Synonym Support
- **Auto complete / Auto suggest**
- Language Analysis / Support for inflected word forms
- Content Elevation / **Paid Search Results** / Editorial Content
- Sorting of Results
- Content indexing through a near instant backend **Index Queue**
- Auto correction (search for the first suggestion)
- and more...

## 1.3 Development and Partnership

The extension is developed in an open source way and the source code is completely available on github. Releases to the TYPO3 TER are done in regular time frames (Usually every 3 months).

To make the development possible you can join a partnership with dkd. By joining the partner program you have the following benefits:

- You support the further development on EXT:solr
- **You get access to add-ons that are not public available**
  - Indexing of files from FAL (TYPO3 File Abstraction Layer)
- You can be mentioned as a sponsor on <http://www.typo3-solr.com>
- You can include support based on your subscription

By the financial investment of our partners it is possible to keep this extension up-to-date and integrate great new features. If you like this extension please think about becoming a partner as well!

If you are interested to become a partner visit <http://www.typo3-solr.com> or call dkd +49 (0)69 - 247 52 18-0.

## GETTING STARTED

In this chapter we would like to give you a quick introduction into the very first steps with EXT:solr.

After reading this chapter you will know:

How to...

- Start a solr server
- Install the extension and connect your TYPO3 system to your solr server
- Index a few pages and see the search results on your website

### 2.1 Solr

First you need to install Solr itself. There are several ways to do so:

#### 2.1.1 Using Hosted-solr.com

If you want to start simple and just create a solr core with a click. You can use hosted-solr.com. For a small fee you get your own solr core in seconds, configured to be used with EXT:solr.

#### 2.1.2 Docker

You can use our official docker image to start and maintain solr server with a small effort.

To build the TYPO3 Solr ELTS image, simply type the following in command line:

```
cd <EXT:solr 11.2.x>/  
docker build --file Docker/SolrServer/Dockerfile --tag=typo3solr/elts-solr:11.2.x .
```

Persistent Data

Our docker image is based on [official Apache Solr image](#).

---

**Important:** Our and official Apache Solr image exports a volume `/var/solr` for persistent data.

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This volume will be mounted to persist the index and other resources from Apache Solr server. Following paths inside the exported volume are relevant for backups.

Path	Contents
<code>data/data/&lt;language&gt;</code>	the index data of corresponding core
<code>data/configset- s/ext_solr_&lt;See_configset_on_version_matrix&gt;/conf/_schema_analysis_&lt;stopwords, synonyms, stemming, etc.&gt;</code>	the managed stop words and other resources

**Tip:** To be save for other scenarios(e.g. SVC of modified Solr Schemas and managed resources), simply backup the whole “data/” folder.

---

Start container with anonymous volume

To run the container with anonymous volume, simply type the following in command line:

```
docker run --name=typo3s-solr-server -d -p 8983:8983 typo3solr/ext-solr
```

This will create a docker anonymous volume and store the data inside of it. To find out the path of used anonymous volume, simply type the following in command line:

```
docker inspect -f '{{ .Mounts }}' typo3s-solr-server
```

Start container with volume on hosts path

There are few steps required to be able to run the container with volume on hosts path.

Following commands will create the named volume “typo3s-solr-server-data” on hosts path and start the container with this volume.

```
mkdir .solrdata
docker volume create --name typo3s-solr-server-data --opt type=none --opt device=
-> $PWD/.solrdata --opt o=bind
docker run --name=typo3s-solr-server --mount source=typo3s-solr-server-data,target=
-> /var/solr -d -p 8983:8983 typo3solr/ext-solr
```

---

**Important:** The folder for solr data MUST exist on the host machine.

---

---

**Important:** The data is owned by containers solr UNIX-User/Group with id 8983, and MUST NOT be changed(re-owned) to different UNIX-Users.

---

---

**Tip:** Following is equivalent docker-compose.yaml definition with “.solrdata” folder next to docker-compose.yaml file.

```
services:
  solr:
    container_name: typo3s-solr-server
    image: typo3solr/ext-solr:<EXT:Solr_Version>
    ports:
      - 8983:8983
    volumes:
      - typo3s-solr-server-data:/var/solr

volumes:
  typo3s-solr-server-data:
    driver: local
    driver_opts:
      type: none
      device: $PWD/.solrdata
      o: bind
```

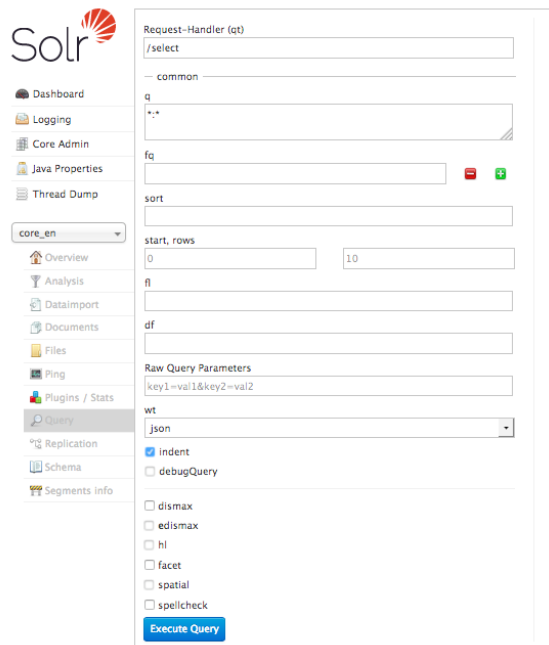
---

Check if Solr is up and running

To check whether Solr is up and running head over to:

`http://<ip>:8983/solr/#/core_en/query.`

You should see the web interface of Solr to run queries:



**Important:** The image ships a default cores for all languages. The data of the cores is stored on an exported volume. When you want to update the container, you can just start a new container using the data volume of the old container. But at the same time this has the limitation, that you should only use this image with the default cores! If you want to create custom cores with a different configuration please read the section “Advanced Docker Usage”

Please note: The steps above show how to build the image from the Dockerfile. You can also download and use our compiled images from dockerhub:

<https://hub.docker.com/r/typo3solr/ext-solr/>

### 2.1.3 Advanced Docker Usage

Our image has the intension to create running cores out of the box. This implies, that the schema is inside the container. The intension in our integration was to stay as close as possible to the official Apache Solr docker images. Sometimes it might make sense that you use the official image directly instead of our image. An example could be when you want to have the solrconfig, schema and data outside of the container.

The following example shows how you can run our configuration with the official Apache Solr Docker container by mounting the configuration and data from a volume (When using Docker on macOS make sure you’ve added the volume folder to “Preferences -> File Sharing”).

```
mkdir -p ~/mysolr
cp -r Resources/Private/Solr/* ~/mysolr/.
mkdir ~/mysolr/data
sudo chown -R 8983:8983 ~/mysolr
docker run -d -p 8983:8983 -v ~/mysolr:/var/solr/data solr:8.5
```

### 2.1.4 Shipped install script (Not recommended)

With the extension we ship and install script that can be used for a **development** context or as inspiration for own deployments. It creates a solr server with a core for all languages. This script is located in “Resources/Private/Install” an it installs a configured solr server that is usable with EXT:solr.

By default this script is not executable and you need to add the execute permissions to your user to run it.

The example below shows how to install a solr server to /home/developer

```
chmod u+x ./Resources/Private/Install/install-solr.sh
./Resources/Private/Install/install-solr.sh -d /home/developer
```

After running the script you are able to open a solr server with over the loopback address. Which means, when you want to access it from outside, you need to create an ssh tunnel.

### 2.1.5 Other Setup

Beside the install script and Docker there are various possibilities to setup solr. All of these possibilities are not officially supported, but the simplify the setup i want to mention them shortly here and summarize the needed steps.

#### Known Installers

All of these installers can be used to setup a plain, reboot save solr server:

- Use the installer shipped with Solr itself *bin/install\_solr\_service.sh*:

Allows to install Solr on many distributions including init scripts.

- Use chef / ansible / whatever dev ops tool:

Allows you to setup a solr server with your DevOps tool.

e.g. <https://galaxy.ansible.com/geerlingguy/solr/> (ansible) or <https://supermarket.chef.io/cookbooks/solr> (chef)

#### Deployment of EXT:solr configuration into Apache Solr

Since EXT:solr 6.0.0 the configuration and all JAR files can be found in *EXT:solr/Resources/Private/Solr* folder. The goal of this approach is to make the deployment much easier.

All you need to do is, you need to copy the configSet directory into your prepared solr installation and replace the solr.xml file. In the installer we do it like this:

```
cp -r ${EXTENSION_ROOTPATH}/Resources/Private/Solr/* ${SOLR_INSTALL_DIR}/server/
↪solr
```

After this, you can decide which cores you want to boot and delete not relevant cores from *\${SOLR\_INSTALL\_DIR}/server/solr/cores/* directory.

If you want to create other cores, you can create them by adding a *<core\_name>/core.properties* file like provided by EXT:solr. This is the recommended workflow, so you can deploy the Solr server in an Infrastructure as Code (IaC) manner.

Alternatively Create a core with the rest api (**not recommended**):

See: “V2 API” on <https://solr.apache.org/guide/solr/latest/configuration-guide/coreadmin-api.html#coreadmin-create>

```
curl -X POST http://localhost:8983/api/cores -H 'Content-Type: application/json' -
↪d '
{
  "create": {
    "name": "<core_name>",
    "configSet": "ext_solr_<XX_Y_Z>",
    "schema": "german/schema.xml",
    "instanceDir": "cores/<core_name>"
    "dataDir": "<absolute-path-to-SOLR-HOME-of_server(standard: /var/solr/data)/>/
↪data/<core_name>"
  }
}
'
```

After installing the solr server and deploying all schemata, the TYPO3 reports module helps you to verify if your setup fits to the requirements of EXT:solr

You now have a fully working, pre configured Solr running to start with

Now you can continue with installing the extension *Install EXT:solr*.

## 2.2 Install EXT:solr

### 2.2.1 Install from TER using the TYPO3 Extension Manager

You can simply install stable versions of EXT:solr using the Extension Manager from the TYPO3 backend.

1. Go to the **Extension Manager**, select **Get Extensions** and search for “solr”.
2. Install the extension.
3. The Extension Manager will also install EXT:scheduler if not installed already for running the indexing tasks
4. While developing we recommend installing devlog for easier error detection, too.

### 2.2.2 Install from git

Alternatively, you can also get the latest development version from GitHub:

```
$ git clone git@github.com:TYPO3-Solr/ext-solr.git solr
```

### 2.2.3 Install with composer

Install this TYPO3 Extension solr via TYPO3 Extension Manager as usual, or via composer by running:

```
composer require apache-solr-for-typo3/solr
```

Head over to the Extension Manager module and activate the Extension.

The screenshot shows the TYPO3 backend interface. On the left is a navigation menu with categories like WEB, FILE, ADMIN TOOLS, and SYSTEM. The 'EXTENSIONS' section is active. The main content area shows the 'Installed Extensions' module. At the top, there's a dropdown for 'Installed Extensions'. Below that, a blue banner indicates 'Composer mode' with a message: 'The system is set to composer mode. Please notice that it is not possible to add an extension with the Extension Manager.' Underneath, there's a search box containing 'solr'. A table lists the installed extensions:

Upd.	A/D	Extension
		Apache Solr for TYPO3 - Enterprise Search

That's all you have to do, now head over to *Configure Extension*.

## 2.3 Configure Extension

After *Install EXT:solr* you need to configure the extension. Only a few steps from below are necessary for *Index the first time*.

### 2.3.1 Extension Configuration

Underlying settings can be found in the extension configuration, though the default settings are appropriate for most sites you should check and adapt this settings if necessary:

Extension Configuration

▼ solr

Basic

Enable features

**A list of white listed plugin namespaces (Required by cacheHash/excludedParameters and plugin flex form)**

basic.pluginNamespaces (string)

tx\_solr

Note: This list only is available in Plugin -> Options -> Plugin Namespace

---

**Include/Exclude global q parameter in/from cacheHash**

basic.includeGlobalQParameterInCacheHash (boolean)

---

**Use closest rootpage for configuration (Performance improvement)**

basic.useConfigurationFromClosestTemplate (boolean)

---

**Enable/Disable record tracking outside siteroot**

basic.useConfigurationTrackRecordsOutsideSiteroot (boolean)

---

**Monitor tables - explicitly monitor these (still requires TS configuration)**

basic.useConfigurationMonitorTables (string)

---

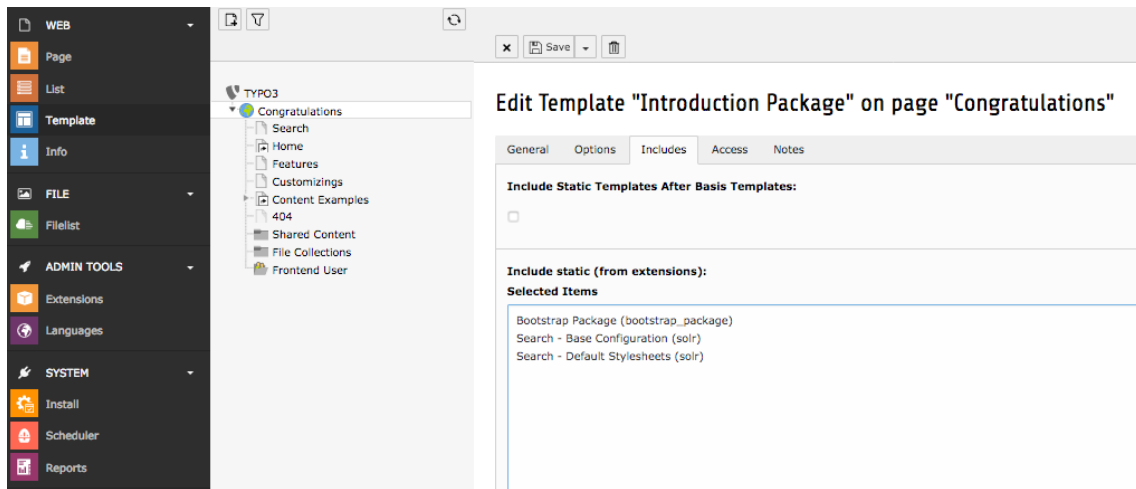
**Allow self signed certificates**

basic.allowSelfSignedCertificates (boolean)

Save "solr" configuration

### 2.3.2 Static TypoScript

The extension already comes with basic TypoScript configuration that will work for small pages out of the box. For now create or edit an existing TypoScript Template record in your page tree and add the provided static TypoScript:



### 2.3.3 Search Markers

EXT:solr is indexing everything on a page between `<!-- TYPO3SEARCH_begin -->` and `<!-- TYPO3SEARCH_end -->` to ensure this is the case, check the output of your website and add the markers to your template.

If the markers are missing, you should add them to your template. To increase the quality of the search results the markers should only wrap the relevant content of a page and exclude e.g. menus, because they are same on each page. The markers can be used multiple times, but make sure each “TYPO3SEARCH\_begin” is properly closed with “TYPO3SEARCH\_end”.

The most simple configuration for my page was:

```
page.10 {
    stdWrap.dataWrap = <!--TYPO3SEARCH_begin-->|<!--TYPO3SEARCH_end-->
}
```

### 2.3.4 Enable indexing

Indexing will only work if you allow content to be indexed by stating so in your TYPO3 setup configuration:

```
config {
    index_enable = 1
}
```

#### Site Handling

In TYPO3 9.5 the new backend module called “Sites” was introduced. This Module can be used to setup and configure the Apache Solr connections.

---

**Tip:** Please refer to [official TYPO3 docs about site handling](#), to setup your first site configuration.

---

**Warning:** EXT:Solr needs a proper domain as base for the site. If the base is set to “/” or a similar relative path, the Indexing will throw an error, so please make sure that “base” is a fully qualified domain like “https://my.project.tld/”

#### Configure Solr Connections

---

**Important:** The Site-Handling GUI provides the common setup scenario for most users only. There is no possibility in the GUI to setup different things for each language in site configuration except Corename(core path).

---

**Tip:** All in sites config.yaml global defined thing for EXT:solr can be configured for each language differently by editing this file manually.

**As first step the authority part of URI to Apache Solr machine must be configured.**

General Languages Error Handling Static Routes Solr

Enable Solr for this site [solr\_enabled\_read]  
 [1]

Scheme [solr\_scheme\_read] Host [solr\_host\_read]  
 https [https] hosted-solr.com

Port [solr\_port\_read] URL path to Apache Solr server [solr\_path\_read]  
 443 I.e. if you use Hosted-Solr.com the path inside the admin panel. Should not contain "/solr".  
 /af7f8a32d49-vendor-name/

Use different write connection [solr\_use\_write\_connection]  
 [0]

**The Corename(aka path to core) for each available language must be assigned respectively.**

## Edit Site Configuration "solr-testsystem" on root level

General Languages Error Handling Static Routes Solr

Available Languages for this Site [languages]

English (en\_US.UTF-8) Base: /

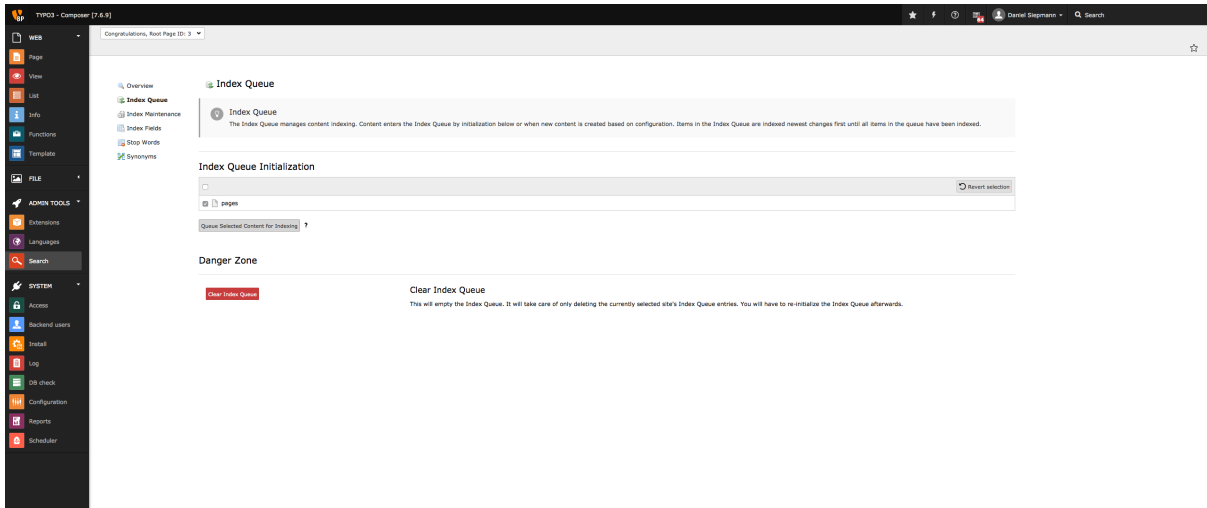
Corename [solr\_core\_read]  
 core\_en

German (de\_DE.UTF-8) Base: /de/

Dansk (da\_DA.UTF-8) Base: /da/

## 2.4 Index the first time

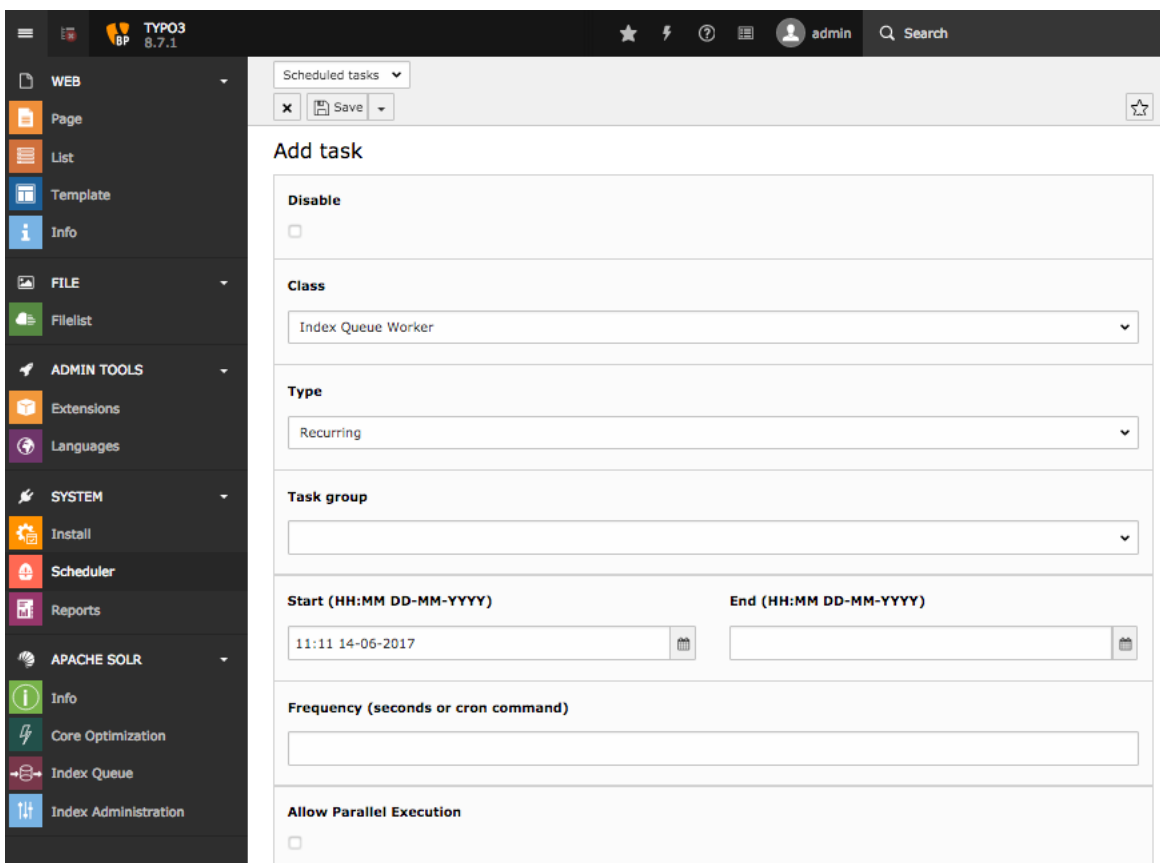
After everything is setup, you need to index the contents of TYPO3 to enable searching in Solr. To do so open the *Apache Solr* module and navigate to the *Index Queue*. Select the contents to index and *Queue Selected Content for Indexing*.



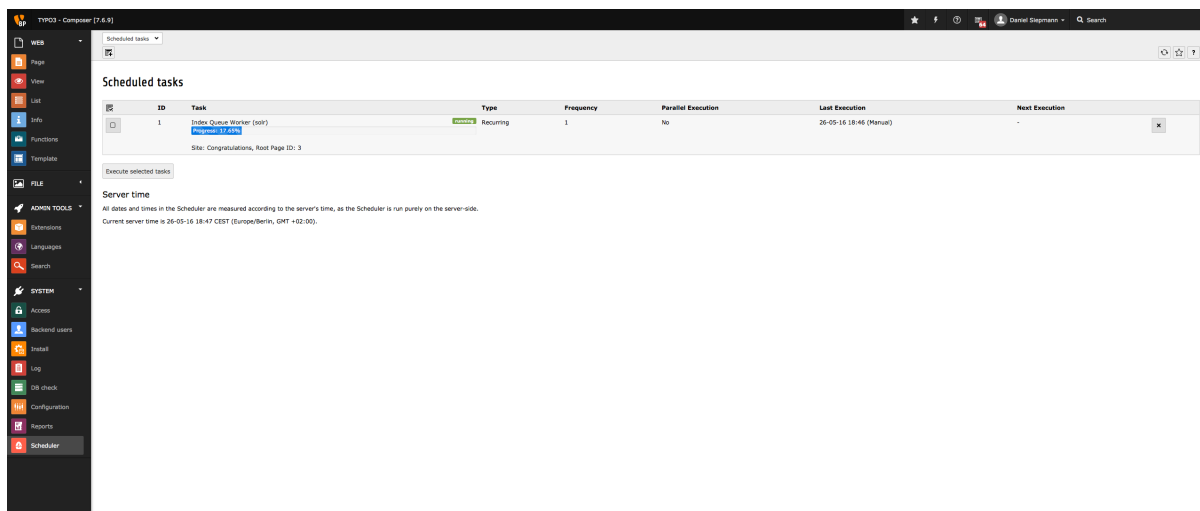
Now the records are added to the index queue and ready to index. The indexing can be triggered from the backend module, or can be triggered by the TYPO3 scheduler.

Switch to the *Scheduler* module. If the module is not available, make sure to enable the extension first. It comes bundled with TYPO3 CMS but is not enabled by default.

Create a new scheduler task to run the indexing:



After the task was created, run it manually. The page will indicate a reload but won't reload after the task was run. Therefore you can reload the module to see the progress bar indicating the current progress of indexing:



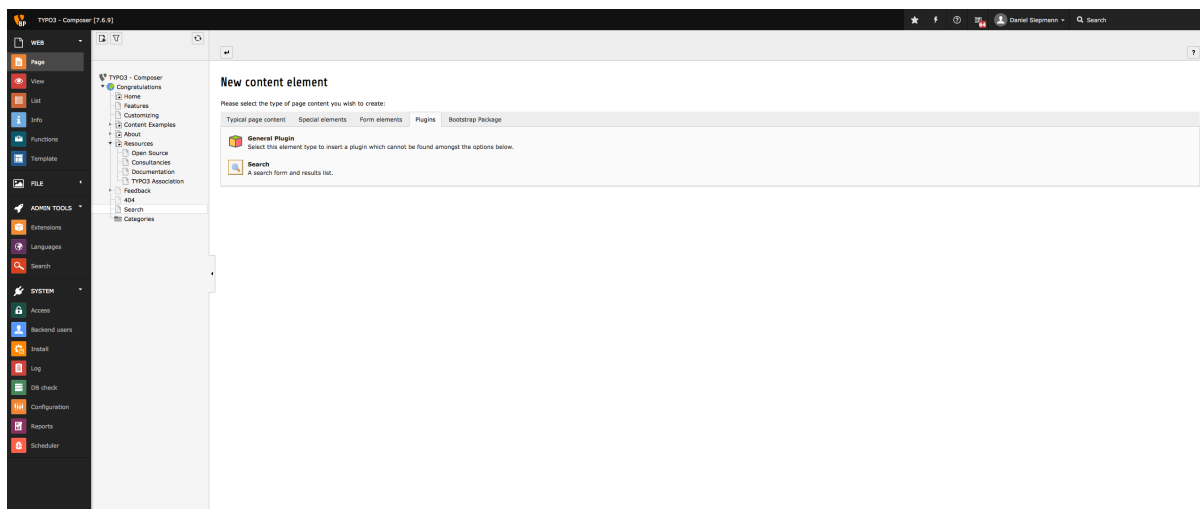
The duration depends on things like the number of records to index and the number of languages configured in your system. Also whether caching is enabled and warmed up.

The extension will now index all records in the queue and send them to Solrs index.

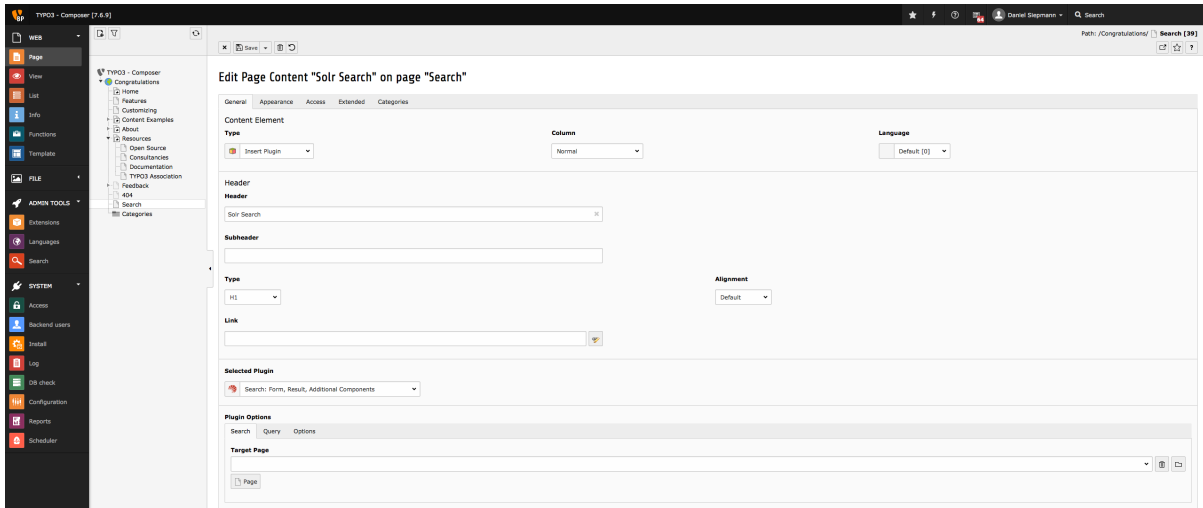
Once you have some records inside the index, you can *Display search and results*.

## 2.5 Display search and results

After Solr has some documents inside his index, you can insert the plugin to provide a search with results from Solr. To do so create a new content record of type *Search* on a page:



Select *Search: Form, Result, Additional Components* if not already selected inside the content element:



Open the page and search for \*, you should see all currently indexed records from Solr:

Sort by

- Relevance
- Title
- Type
- Author
- Creation Date

Narrow Search

Content Type

+ pages (10)

Last searches

- cms
- typo3
- \*

Frequent searches

cms

Search

**Parsed Query:**  
 (+DisjunctionMaxQuery(((tagsH2H3:cms)^3.0 | (keywords:cms)^2.0 | (tagsH4H5H6:cms)^2.0 | (tagsH1:cms)^5.0 | (title:cms)^5.0 | (content:cms)^40.0 | tagsInLine:cms)) | no\_coord

Searched for "cms". Found 10 results in 17 milliseconds. Displaying results 1 to 10 of 10.  
 Results per page: 10

**Congratulations**  
 Relevance: 100%  
 with TYPO3 CMS, we've included usage examples of the standard content elements that have made TYPO3 CMS so popular. Examples Test the CMS [...] Open Source CMS at Enterprise level. Start browsing Grab a cup of coffee and start browsing to learn why TYPO3 CMS is the most [...] Explore TYPO3 CMS backend and the limitless possibilities of TYPO3 CMS by using one of the predefined users with different levels of access. Log into TYPO3

Score	Field	Boost
0	(inaccurate analysis): Not all parts of the score have been taken into account.	

**Customizings**  
 Relevance: 79%  
 developers around the world. And your independence? Guaranteed by 1.800 agencies. Thus keeps your CMS flexible and your investments save. 6.000 Extensions [...] Extbase: TYPO3's Built-in MVC Framework Recent versions of TYPO3 CMS include a built-in Model-View-Controller (MVC) framework called Extbase, which allows developers to [...] default backend modules run with Extbase. Extbase is a backport of features from TYPO3 FLOW to TYPO3 CMS. Fluid: Next Generation Templating

Score	Field	Boost
0	(inaccurate analysis): Not all parts of the score have been taken into account.	

**Quote**  
 Relevance: 67%  
 Framework. The goal of this package is to give an advanced example of how modern templating in TYPO3 CMS can be handled nicely without depending on third party extensions. Bootstrap Package on GitHub

Score	Field	Boost
0	(inaccurate analysis): Not all parts of the score have been taken into account.	

That's it. You now have a working TYPO3 Installation with Solr integration. You are able to queue items for indexing, index them and provide an interface for visitors to search the indexed records.

You can now adjust the fluid templates to your needs.



## BACKEND

The chapter before gives you a short introduction about how to setup a solr server, the extension and index a few documents into solr. In this chapter we want to go deeper and learn how to write more complex indexing configurations and see what other possibilities the backend of EXT:solr provides.

### 3.1 ConnectionManager

#### 3.1.1 TYPO3 Site mode

You can configure all solr connection properties along with your TYPO3 site in the site module.

The configuration in the UI is limited to the following settings to keep the setup as simple as possible:

Global:

- Scheme
- Host
- Port
- Path to cores

Languagelevel:

- Solr core name

If you have a more complex setup or need to configure username and password please configure solr by editing the yaml file.

The fallback mechanism allows you to overwrite settings on the language level.

The fallback mechanism work like that:

Each setting has the following structure `solr_{${setting}}_{${scope}}` . The scope can be read or write. Every setting can be overwritten for the scope write, if nothing is configured it will fallback to the read setting. Every setting can be defined on the language level, if it is not configured on the language level it fallsback to the global setting.`

Example:

```
base: 'http://solr-ddev-site.ddev.site/'
baseVariants: { }
errorHandling: { }
languages:
  -
    title: English
    enabled: true
    base: /
    typo3Language: default
    locale: en_US.UTF-8
    iso-639-1: en
```

```

navigationTitle: ''
hreflang: en-US
direction: ''
flag: global
solr_host_read: solr_node_1
solr_core_read: core_en
languageId: '0'
-
title: German
enabled: true
base: /de/
typo3Language: de
locale: de_DE.UTF-8
iso-639-1: de
navigationTitle: ''
hreflang: de-DE
direction: ''
flag: global
solr_host_read: solr_node_2
solr_core_read: core_de
languageId: '1'
rootPageId: 3
routes: { }
solr_enabled_read: true
solr_path_read: /solr/
solr_port_read: 8983
solr_scheme_read: http
solr_use_write_connection: false

```

The example above shows that you are able to define the setting `solr_host_read` on the language level. Since this is a more advanced configuration and the user interface should be kept simple, this can only be configured in the yaml.

### 3.1.2 Legacy Mode

**Warning:** The ability to use this mode will be removed in EXT:solr 11.0.

In EXT:solr all the configuration, including options affecting backend functions, are done in TypoScript. The clear cache menu provides an entry to initialize the Solr connections configured in TypoScript.

- Configure the Solr connection in TypoScript under `plugin.tx_solr.solr`, providing host, port, and path.
- On your site's root page set the flag Use as Root Page on the Behaviour tab.
- Initialize the Solr connections through the clear cache menu

When initializing the Solr connections the extensions looks for all the pages with the root flag set, generates the TypoScript configuration for that page like in the frontend and reads the Solr connection parameters.

The extension also repeats that process for each language configured on the installation's root (`uid = 0`). This way you can configure different Solr cores for each language by using regular conditions that change the path of the Solr connection depending on the currently selected language.

Once all the configured Solr connections in the installation are found, they're stored in TYPO3's registry so that they can easily be retrieved without needing to reevaluate the TypoScript configuration every time we connect to Solr.

All that magic happens in class `source/Classes/ConnectionManager.php`. The connection manager and it's public API actually must be used whenever a Solr connection is needed.

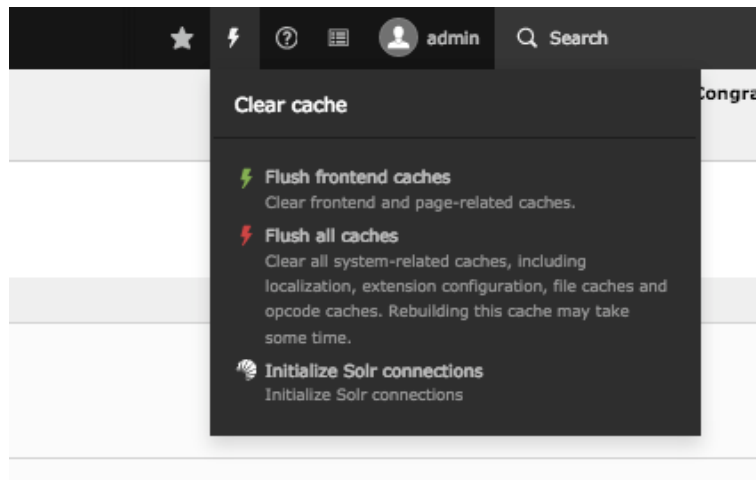


Fig. 3.1: Initialize all solr connections

## 3.2 IndexQueue Configuration

As you already learned you can index pages very easy with EXT:solr and setup a search for pages in seconds. Beside pages, there might be other records in your TYPO3 CMS that you want to have available in your search results.

### 3.2.1 Indexing custom records

As a core feature EXT:solr allows you to write custom typoscript configuration to index records from any extension just with configuration. To see how this is working, we open the content of the TypoScript example “**Search - Index Queue Configuration for news**” that can be found in “Configuration/TypoScript/Examples/IndexQueueNews”:

```
plugin.tx_solr.index.queue {
    news = 1
    news {
        table = tx_news_domain_model_news

        fields {
            abstract = teaser

            author = author
            authorEmail_stringS = author_email

            title = title

            content = SOLR_CONTENT
            content {
                cObject = COA
                cObject {
                    10 = TEXT
                    10 {
                        field = bodytext
                        noTrimWrap = || |
                    }
                }
            }

            category_stringM = SOLR_RELATION
            category_stringM {
                localField = categories
                multiValue = 1
            }
        }
    }
}
```

```

    }

    keywords = SOLR_MULTIVALUE
    keywords {
        field = keywords
    }

    tags_stringM = SOLR_RELATION
    tags_stringM {
        localField = tags
        multiValue = 1
    }

    url = TEXT
    url {
        typolink.parameter = {$plugin.tx_news.settings.detailPid}
        typolink.additionalParams = &tx_news_pil[controller]=News&
            tx_news_pil[action]=detail&tx_news_pil[news]={field:uid}
        typolink.additionalParams.insertData = 1
        typolink.useCacheHash = 1
        typolink.returnLast = url
    }
}

attachments {
    fields = related_files
}
}

plugin.tx_solr.logging.indexing.queue.news = 1

```

By reading the example above you might recognize the following facts:

- The indexing configuration is done in the TypoScript path ‘plugin.tx\_solr.index.queue.[configName]’ and there can be multiple queue configurations.
- The database table is configured in the property ‘plugin.tx\_solr.index.queue.[configName].table’. This allows you to have multiple index queue configurations for the same database table. This can be helpful when you have multiple queue configurations for news (e.g. if you have a press & corporate news section on your website).
- The solr fields are configured in ‘plugin.tx\_solr.index.queue.[configName].fields’. This allows you to flexibly fill any solr field. The combination of dynamic fields (*Appendix - Dynamic Fields*) and the queue configuration allows you to write any kind of data into solr without adapting the solr schema.
- **There are custom TypoScript objects from EXT:solr that are used in the index queue configuration**
  - *SOLR\_CONTENT*
  - *SOLR\_RELATION*
  - *SOLR\_MULTIVALUE*

When the index queue configuration of your custom record is ready, you can check the index queue in the backend module and add the news items to the queue.

### 3.2.2 Custom records - links and detail page

In the example above *typolink* is used to build a link to the detail view of the news. This is required, because EXT:solr can not know the business logic of the news extension to build a detail link. The typoscript constant “`plugin.tx_news.settings.detailPid`” is used to configure the target pageId of the news single view. This has two important impacts:

- The constant (*plugin.tx\_news.settings.detailPid*) need to point to a valid news single page.
- The page with the news single view, should be configured with “*Include in Search => Disable*” because indexing this page with the normal page indexing without a news id will produce an error page.

Edit Page "News"

General	Metadata	Appearance	Behaviour	Resources	Language	Access	Categories
Links to this Page							
URL Alias							
<input type="text"/>							
Link Target							
<input type="text"/>							
Cache							
Cache Lifetime		Cache Tags:		Cache			
Default		<input type="text"/>		<input type="checkbox"/> Disable			
Miscellaneous							
Use as Root Page		Include in Search		Stop Page Tree			
<input type="checkbox"/> Enabled		<input checked="" type="checkbox"/> Disable		<input type="checkbox"/> Enabled			

Fig. 3.2: Include in Search - Disable

### 3.2.3 Sysfolders outside the siteroot

The page with a domain record act as a siteroot in EXT:solr. It is a good practice not to nest the siteroots and do the configuration on the root page. Changes on records that are done in the TYPO3 backend are detected and the solr document will be readded to the index queue when something was changed.

By default only records are monitored for a site that are in the tree of the site. If you want to index records and detect changes on records in a different siteroot, the index queue configuration needs to contains “additionalPageIds” (e.g.: ‘`plugin.tx_solr.index.queue.<queueName>.additionalPageIds = 45,48`’).

Since the monitoring of changes in these records is expensive from performance perspective, you need to enable this feature in the extension configuration:

## 3.3 Backend Modules

The backend modules are in the “APACHE SOLR” section available and can be unlocked for BE-users or/and groups. The modules help you to do maintenance tasks and get an overview on the system status:

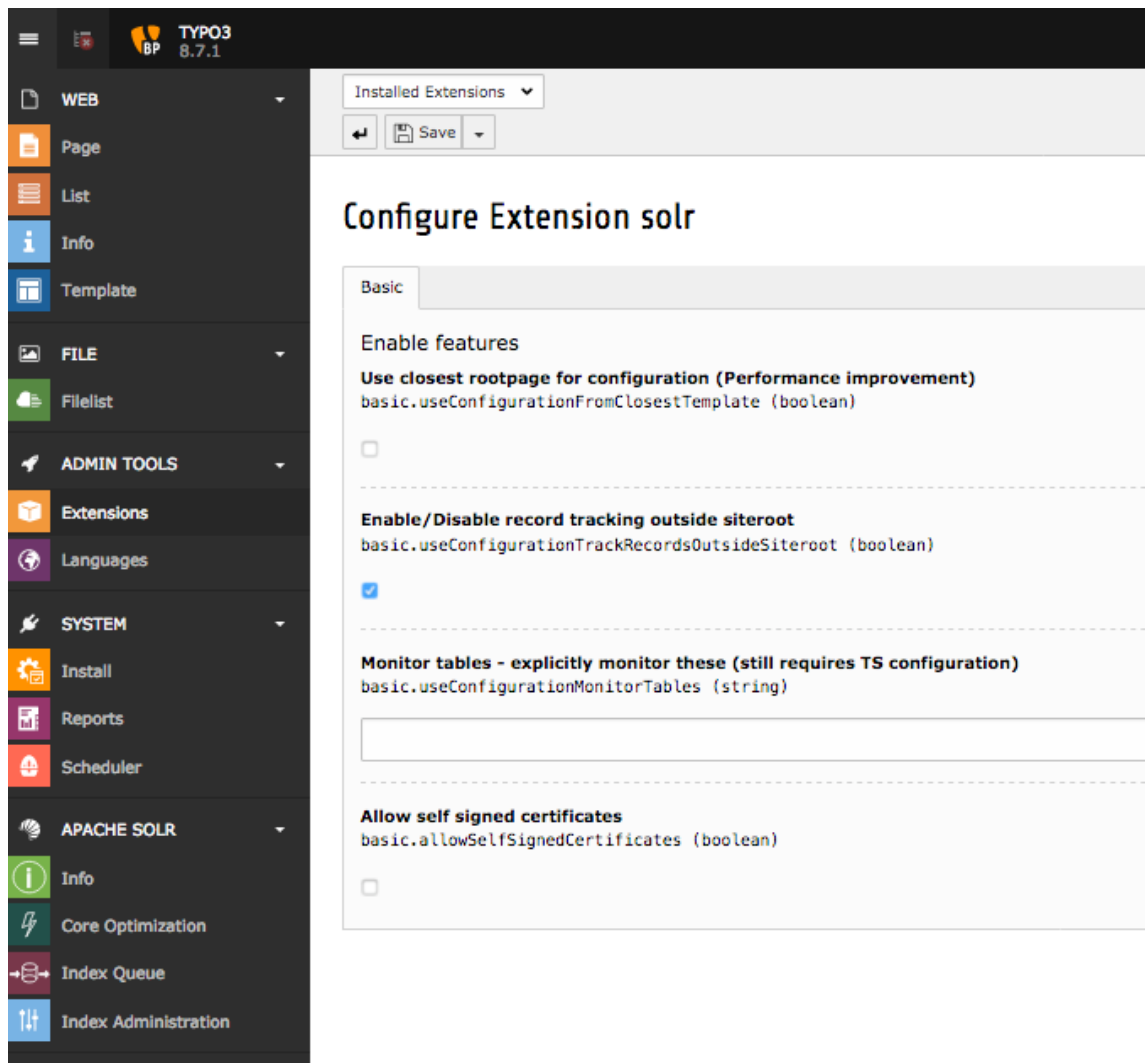
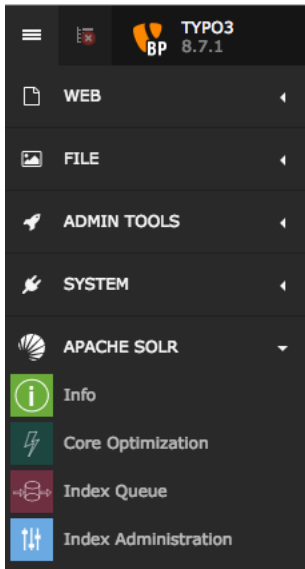


Fig. 3.3: Enable tracking of records outside siteroot



During the next paragraphs we will go over the modules and explain, what could be done with them.

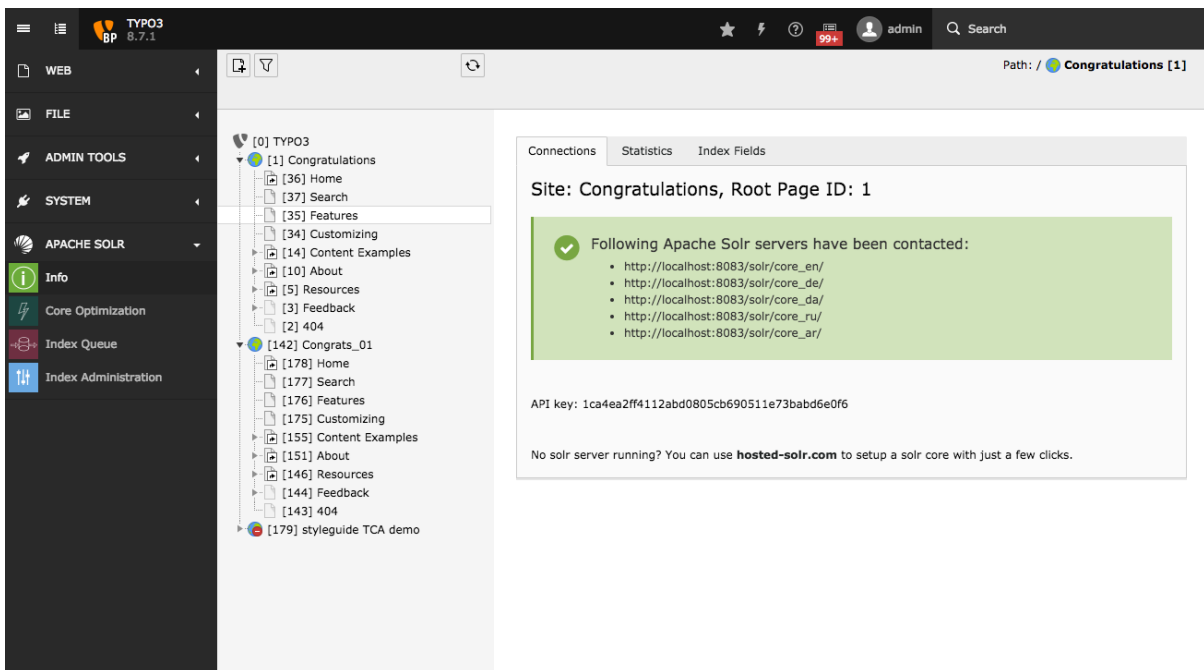
### 3.3.1 Info Module

Info Module shows you important infos about TYPO3 CMS and Solr state.

It contains different info tabs described below:

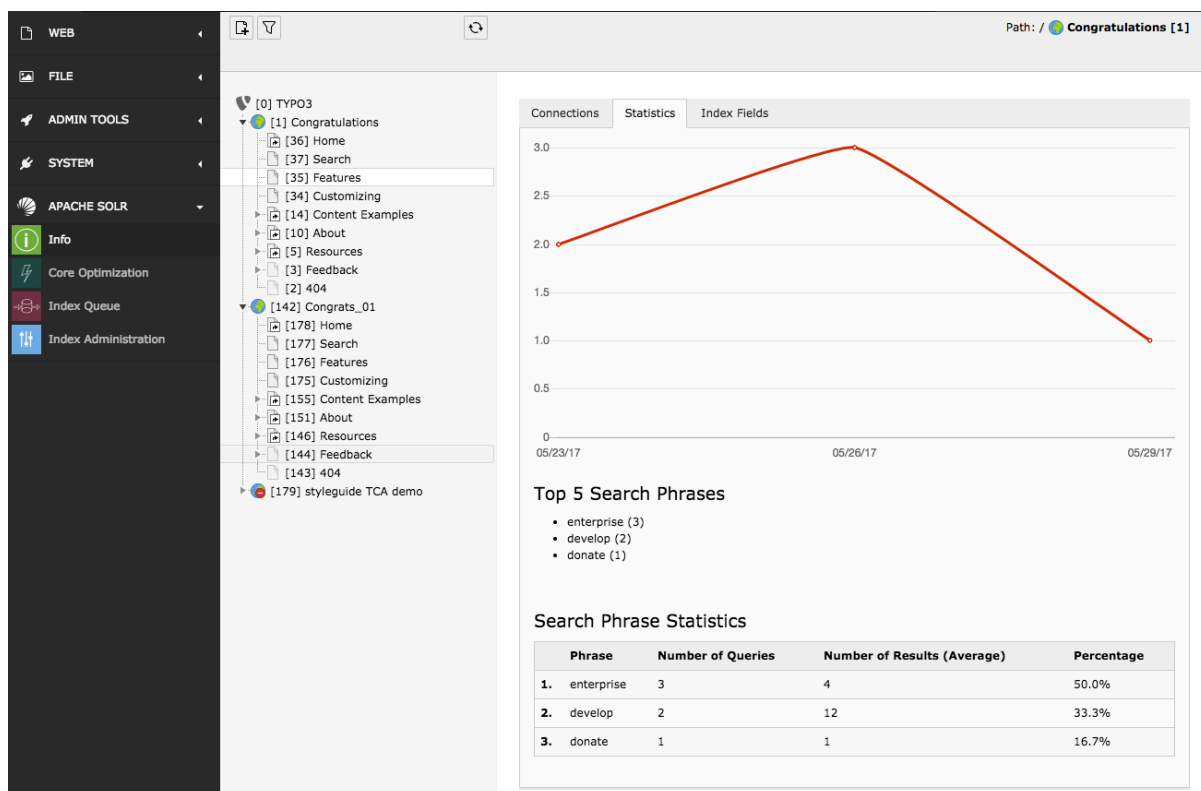
#### Connections

It lists all the for the site configured connections and their status.



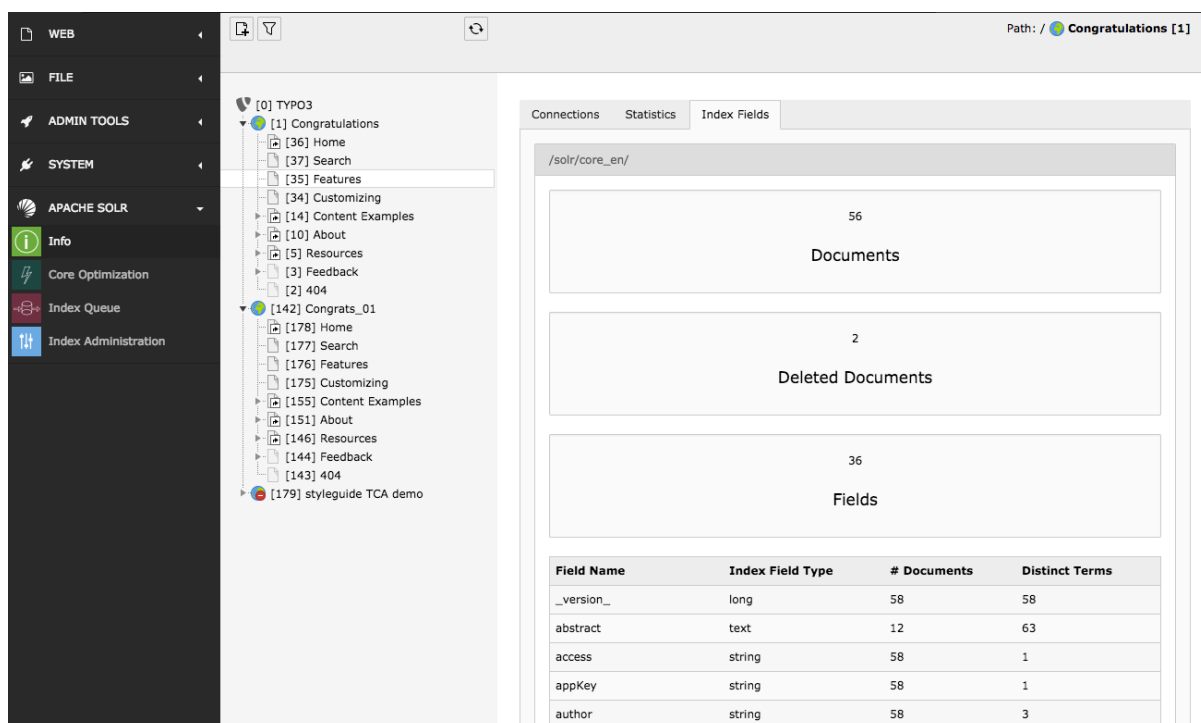
#### Statistics

The **Search Statistics** module allows you to see Top Search Phrases with and without results. In addition it possible to see a complete listing with hits etc. ranked by Top search keywords.



## Index Fields

The **Index Fields** module allows you to see, how many documents you have in which solr core and which fields those documents have.

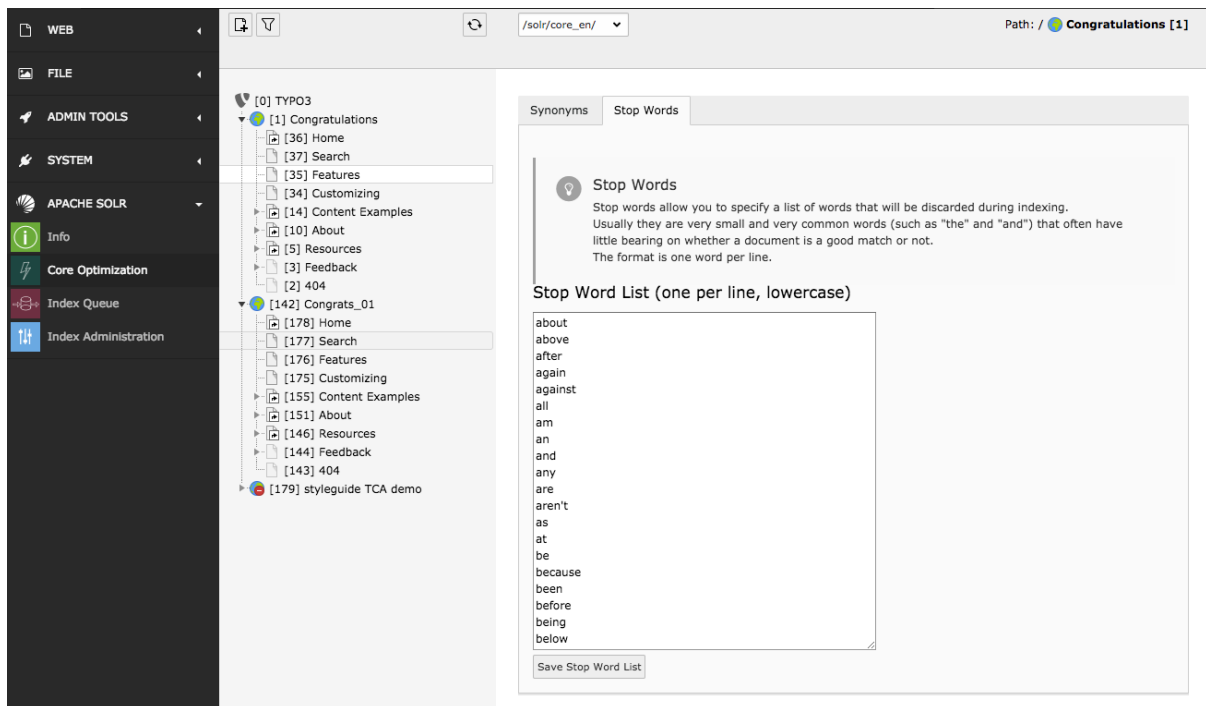


### 3.3.2 Core Optimization

Core optimization Module is responsive for managing the behaviour of cores. By modifying of following things, you can also change the ranking and/or the results.

## Stop Words

With the stopwords module you can define a list of words that should be excluded from the search.



Common usecases are:

- Very often occurring words like “the”, “and” ... are excluded or filtered out because they are more or less “noize words”.
- You can add words that you want to avoid from indexing.

## Synonyms

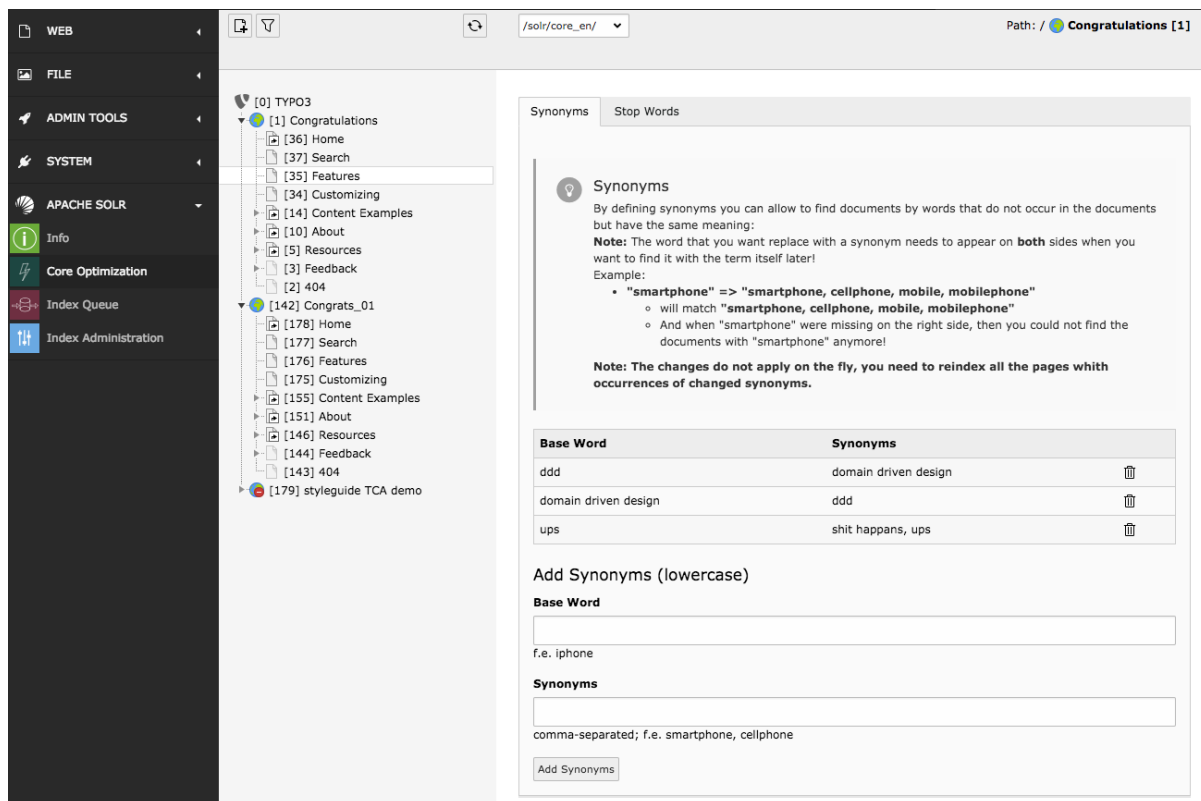
With the synonyms module you can allow to find documents by words that do not occur in the document but have the same meaning:

- E.g. smartphone, cellphone, mobile, mobilephone

**Note:** The word that you want replace with a synonym needs to appear on **both** sides when you want to find it with the term itself later

## Example

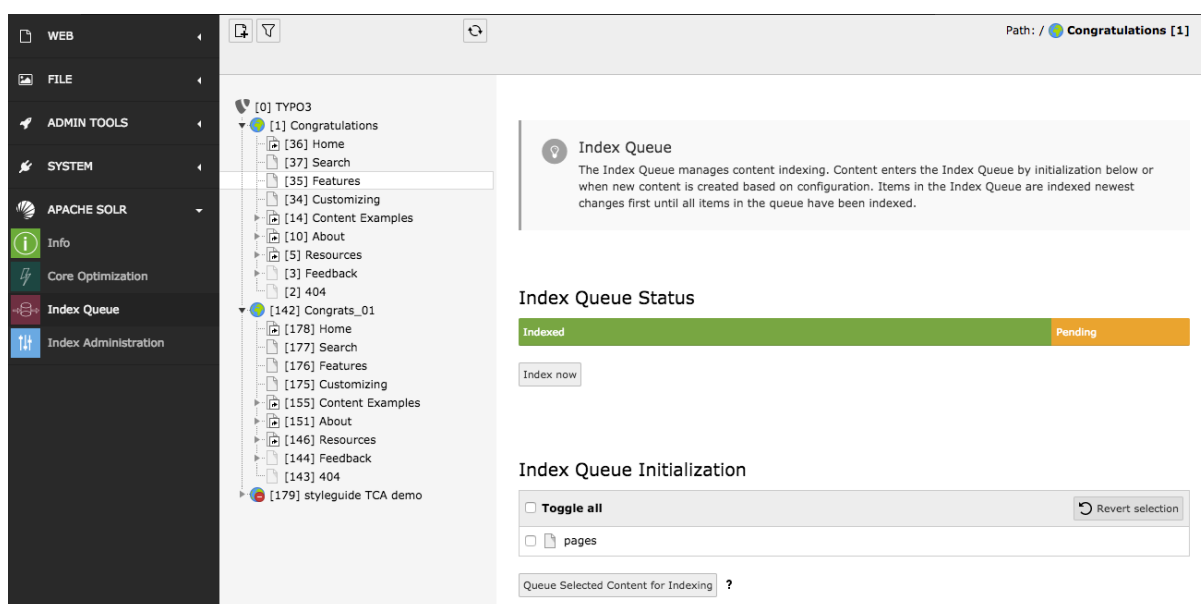
smartphone => smartphone, cellphone, mobile, mobilephone will match “smartphone, cellphone, mobile, mobile-phone”, when smartphone is missing on the right side, you will not find the document for smartphone anymore!



### 3.3.3 Index Queue

The **Index Queue** module is the most important module. It allows you to do the following things:

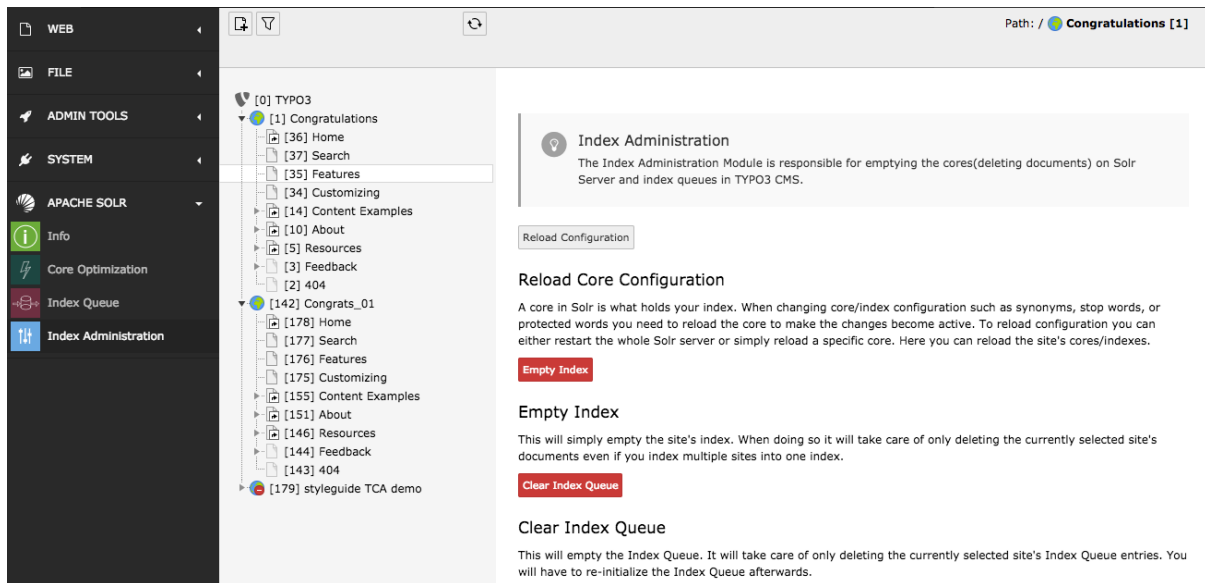
- Select item types and add them for indexing to the indexing queue.
- See the fill state of the indexing queue.
- Check the indexing queue for errors when the indexing of an items failed.
- Start an instant indexing run, directly from the module.
- Clear the indexing queue and re-queue items.



### 3.3.4 Index Administration (earlier Index Maintenance)

The **Index Administration** module allows you, to do the following administrative operations on your solr index:

- Reload the solr configuration.
- Empty your solr index. This removes all documents from the index of the current selected site.
- Clear the indexing queue.



## 3.4 Index Inspector

Beside the own backend module, EXT:solr provides a feature called **“Search Index Inspector”**. This Tool allows you to select a page or sysfolder and check what data is stored for this entity in the solr index.

The **“Search Index Inspector”** can be opened with the TYPO3 Info Module (*“Web > Info > Search Index Inspector”*) it shows the stored data in solr from the page or sysfolder that is selected in the pagetree:

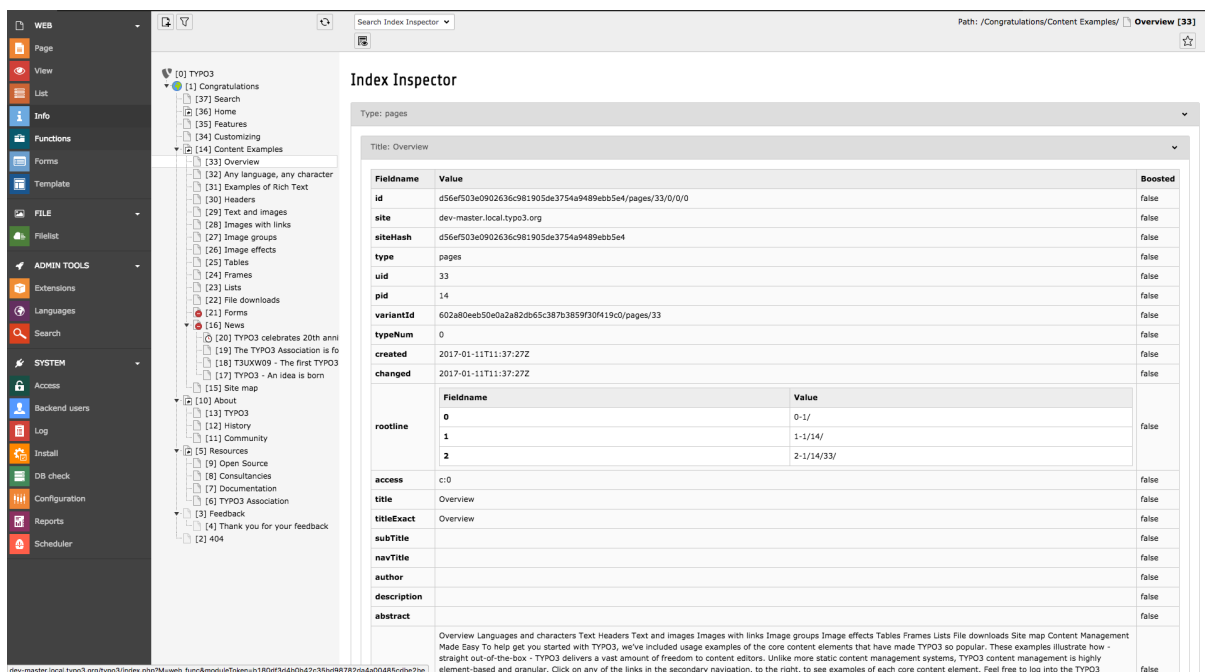


Fig. 3.4: The EXT:solr Search Index Inspector

## 3.5 Page properties

EXT:solrs indexing behaviour depends on page properties. Depending on the state of page properties the pages and or sub pages may be indexed or not.

### 3.5.1 Behaviour

#### Edit Page "Pages"

The screenshot shows the 'Behaviour' tab of the page editor. It contains the following sections:

- Links to this Page:** A 'Link Target' dropdown menu.
- Caching:** A 'Cache Lifetime' dropdown menu set to 'Default [0]' and a 'Cache Tags' text input field.
- Miscellaneous:** Four toggle switches:
  - 'Use as Root Page [is\_siteroot]': Unchecked.
  - 'Include in Search [no\_search]': Checked.
  - 'Include sub entries in Search [no\_search\_sub\_entries]': Checked.
  - 'Hide child pages in page tree [php\_tree\_stop]': Unchecked.
- Use as Container:** A 'Contains Plugin [module]' dropdown menu.

At the bottom right, there is a 'Page [65]' indicator.

Fig. 3.5: The **Behaviour** tab of the page properties

**Include in Search (no\_search)** By default, every allowed page is indexed. Use this flag to exclude the current page from being indexed.

**Include sub entries in Search (no\_search\_sub\_entries)** Use this flag, to be able to exclude sub pages from index recursively. By unsetting this flag, the sub pages/entries of desired page will be excluded from index.

---

**Tip:** To exclude the page and its sub pages disable no\_search and no\_search\_sub\_entries at same time.

---

## 3.6 Scheduler

When you want to index content from TYPO3 into solr automatically EXT:solr ships scheduler tasks, that can be called at a configured time or directly from the backend.

### 3.6.1 Index Queue Worker

Changes that are done in the backend by an editor are written into a queue. This queue is processed asynchronously with a scheduler task and each item in the queue is indexed into solr.

The “**Index Queue Worker**” task has the following custom properties:

- **Site:** Here you select the solr site, that you want to index with this task instance.
- **Number of documents to Index:** Here you can configure how many documents you want to index in one run. Depending on the performance of your system and the expected update time of the search you can choose a realistic number here.
- **Forced webroot:** The scheduler task can be executed in the cli context, because no webserver is used there, TYPO3 is unable to detect your webroot. As assumption we use PATH\_site as default here. When you need to configure something else, you can do it with this option. You can use the marker `###PATH_site###` and `###PATH_typos3###` to define relative paths here, to be independent from the concrete instance.

The screenshot shows a configuration form for the 'EXT:solr Index Queue Worker - Scheduler Task'. It has three main sections:
 

- Site:** A dropdown menu with 'Congratulations, Root Page ID: 1' selected.
- Number of documents to index:** A text input field containing the number '50'.
- Forced webroot (only needed when webroot in not PATH\_Site):** An empty text input field.

Fig. 3.6: The EXT:solr Index Queue Worker - Scheduler Task

### 3.6.2 Force Re-Indexing of a site

This task allows you to force the re-indexing of a site & indexing configuration at a planned time.

The **Force Re-Indexing of a site** task has the following custom properties:

- **Site:** Here you select the solr site, that you want to index with this task instance.
- **Index Queue configurations to re-index:** Here you can limit the set of indexing configurations that should be Re-Indexed.

The screenshot shows a configuration form for the 'EXT:solr Force Re-Indexing of a site - Scheduler Task'. It has two main sections:
 

- Site:** A dropdown menu with 'Congratulations, Root Page ID: 1' selected.
- Index Queue configurations to re-index:** A list of checkboxes next to configuration names:
  - pages
  - fileadmin (sys\_file\_storage)
  - news (tx\_news\_domain\_model\_news)

Fig. 3.7: The EXT:solr Force Re-Indexing of a site - Scheduler Task

### 3.6.3 Optimizing cores of a site

This task allows you to optimize the indexes of given cores for a site at a planned time.

The **Optimize index of a site** task has the following custom properties:

- **Site :** Here you select the solr site, that you want to index with this task instance.
- **Cores to optimize index for :** Here you can select the cores that should be optimized by the task.

The screenshot shows a configuration form for the 'EXT:solr Optimize index of a site - Scheduler Task'. It has two main sections:
 

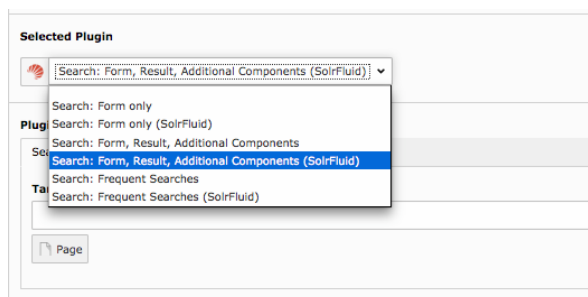
- Site:** A text input field containing 'Congratulations, Root Page ID: 1'.
- Cores to optimize index for:** A list of checkboxes next to core names:
  - Toggle all**
  - /solr/typo3-10-en [/solr/typo3-10-en]
  - /solr/typo3-10-dk [/solr/typo3-10-dk]
  - /solr/typo3-10-de [/solr/typo3-10-de]

Fig. 3.8: The EXT:solr Optimize index of a site - Scheduler Task

## 3.7 Plugins

EXT:solr provides the following plugin instances that can be configured in the backend:

- Results plugin: **“Search: Form, Result, Additional Components”**
- Form plugin: **“Search: Form only”**
- Frequent Searches plugin: **“Search: Frequent Searches”**



## 3.8 Results Plugin

The results plugin is the most important plugin of the extension. It is responsible to render a search form and the results.

### 3.8.1 Flexform Configuration

All configuration can be done with TypoScript and the settings from EXT:solr are used. For some settings it makes sense to overwrite them with the flexform in the plugin settings.

The following settings can be overwritten by instance with the flexform:

#### “Target Page”:

Target page that should be used when a search is submitted. This can be useful when you want to show the results on another page.

When nothing is configured the current page will be used.

Overwritten TypoScript Path	plugin.tx_solr.search.targetPage
Type:	Integer

#### “Initialize search with empty query”:

If enabled, the results plugin issues a “get everything” query during initialization. This is useful, if you want to create a page that shows all available facets although no search has been issued by the user yet.

**Note:** Enabling this option alone will not show results of the get everything query. To also show the results of the query, see option *Show results of initial empty query* below.

Overwritten TypoScript Path	plugin.tx_solr.search.initializeWithEmptyQuery
Type:	Boolean

#### “Show results of initial empty query”:

Requires **“Initialize search with empty query”** (above) to be enabled to have any effect. If enabled together with **“Initialize search with empty query”** the results of the initial “get everything” query are shown. This way, in combination with a filter you can easily list a predefined set of results.

Overwritten TypoScript Path	plugin.tx_solr.search.showResultsOfInitialEmptyQuery
Type:	Boolean

#### “Initialize with query”:

This configuration can be used to configure an initial query string that is triggered when the plugin is rendered.

Overwritten TypoScript Path	plugin.tx_solr.search.initializeWithQuery
Type:	String

#### “Show results of initial query”:

This option is used to configure if the results of an initial query should be shown.

Overwritten TypoScript Path	plugin.tx_solr.search.showResultsOfInitialQuery
Type:	Boolean

#### “Filters”:

This flexform element allows you to define custom filters by selecting a solr field and a value:

Overwritten TypoScript Path	plugin.tx_solr.search.query.filter.
Type:	Array

#### “Sorting”:

When you want to sort initially by a field value and not by relevance this can be configured here.

Overwritten TypoScript Path	plugin.tx_solr.search.query.sortBy
Type:	String
Example:	title desc

#### “Boost Function”:

A boost function can be useful to influence the relevance calculation and boost some documents to appear more at the beginning of the result list. Technically the parameter will be mapped to the “bf” parameter in the solr query.

Use cases for example could be:

##### “Give never documents a higher priority”:

This could be done with a recip function:

```
recip(ms(NOW,created), 3.16e-11, 1, 1)
```

##### “Give documents with a certain field value a higher priority”:

This could be done with:

```
termfreq(type, 'tx_solr_file')
```

Overwritten TypoScript Path	plugin.tx_solr.search.query.boostFunction
Type:	String
Example:	recip(ms(NOW,created),3.16e-11,1,1)

See also:

<https://cwiki.apache.org/confluence/display/solr/The+DisMax+Query+Parser#TheDisMaxQueryParser-Thebf%28BoostFunctions%29Parameter> <https://cwiki.apache.org/confluence/display/solr/Function+Queries>

#### “Boost Query”:

The boostQuery is a query that can be used for boosting. Technically it is mapped to the “**bq**” parameter of the solr query. Compared to boost a function a boost query provides less use cases.

An example could be to boost documents based on a certain field value:

**type:tx\_solr\_file**

Overwritten TypoScript Path	plugin.tx_solr.search.query.boostQuery
Type:	String
Example:	type:tx_solr_file

See also:

<https://cwiki.apache.org/confluence/display/solr/The+DisMax+Query+Parser#TheDisMaxQueryParser-Thebq%28BoostQuery%29Parameter>

## FRONTEND

This part describes the frontend part of EXT:solr. Since version 7.0.0 the templating is done with the fluid templating engine.

### 4.1 Concepts

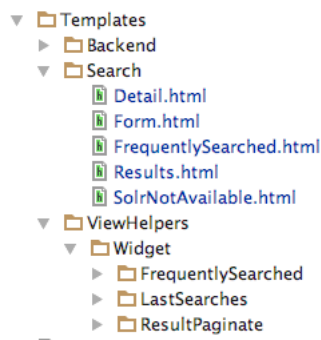
Since EXT:solr 7.0.0 the old templating of EXT:solr was dropped and rendering with fluid was added.

Along with this change some concepts have changed:

- Until EXT:solr 7.0.0 EXT:solr css and javascript was loaded by EXT:solr automatically. In most cases you want to use custom css or you have custom javascript and the integrator want to decide which css or javascript to use. Therefore EXT:solr does not load it by default anymore and the integrator can load it with typoscript. EXT:solr provides a lot of example typoscript templates that load the default css or load the javascript that is needed to use a specific feature. Maybe take the time to explore the typoscript templates that are shipped with the extension to see how they are implemented.
- **The were some old typoscript settings that manipulate the data before it was passed to the view. With fluid this can also be done:**
  - `plugin.tx_solr.search.results.fieldRenderingInstructions`
  - `plugin.tx_solr.search.results.fieldProcessingInstructions` (The `fieldProcessingInstructions` still exist at index time since there it is still needed)
- **Beside that there were some template related settings in the typoscript, that can be solved just with fluid:**
  - `plugin.tx_solr.search.faceting.facetLinkATagParams` or `plugin.tx_solr.search.faceting.[facetName].facetLinkATagParams`  
When you need something like this, you can just change the partials or render a facet with a custom partial (`partialName = MyPartial`) and add the properties there.
  - `plugin.tx_solr.search.faceting.removeFacetLinkText` This can be done just by rendering the text in the partial, that you need.
- The setting `faceting.facets.[facetName].selectingSelectedFacetOptionRemovesFilter` has been removed, since it is possible to build this functionality just with Fluid ViewHelpers. The file “EXT:solr/Resources/Private/Templates/Partials/Facets/OptionsToggle.html” shows how `f:if` together with ``option.selected`` can be used to have this behaviour.

### 4.2 Fluid Template Structure

First we start with a short overview of the template structure. This is just to get an rough overview. The templates will be explained in detail in the template where they belong to:



- **Layouts:** Layouts that are used in the search and the faceting.
- **Partials:**
  - **Facets:** Partials that are use to render the specific facet types.
  - **Result:** Partials that are used during the result rendering (e.g. to render the result document, sorting or perPage selector)
  - **Search:** Partials that are used for the search also when no search was executed.
- **Templates:**
  - **Search:** All templates that are used to render the actions in the SearchController
  - **ViewHelper:** All templates that are use in the widgets (FrequentSearched, LastSearches, Result-Paginate)

All backend related files are in a “Backend” folder. Everything else is frontend related.

## 4.3 Result List

The most important part of a search are the results. The rendering of the results is done in the “Results.html” template (Located in Templates/Search/Results.html)

The following part of the default template iterates over the results and renders every document with the Document.html partial (Partials/Frontend/Result/Document.html)

```

<s:widget.resultPaginate resultSet="{resultSet}">
  <ol start="{pagination.displayRangeStart}" class="results-list">
    <f:for each="{documents}" as="document">
      <f:render partial="Result/Document" section="Document"
        arguments="{resultSet:resultSet, document:document}" />
    </f:for>
  </ol>
</s:widget.resultPaginate>
  
```

This structure allows you to use e.g. the fluid if ViewHelper to render a result with a different partial, based on a field value. But as you see in the template above, by default the partial “Result/Document” is used.

The “document” partial is getting the document object. In our case this is an instance of “ApacheSolrForTypo3SolrfluidDomainSearchResultSetSearchResult” the api of this object allows to get the solr field content with “Document->getFieldName()” that can be used as “document.fieldName” in fluid.

## 4.4 Facets

The goal of a good search is, that the user will find what he is looking for as fast as possible. To support this goal you can give information from the results to the user to “drill down” or “filter” the results up to a point where he exactly finds what he was looking for. This concept is called “faceting”.

Imagine a user in an online shoe shop is searching for the term “shoe”, wouldn’t it be useful to allow the user to filter by “gender”, “color” and “brand” to find exactly the model where he is looking for?

In the following paragraphs we will get an overview about the different facet types that can be created on a solr field just by adding a few lines of configuration.

#### 4.4.1 Facet Types

A solr field can contain different type of data, where different facets make sence. The simplest facet is an option “facet”. The “options facet” just contains a list of values and the user can choose one or many of them. A more complex type could be a “range facet” on a price field. A facet like this needs to allow to filter on a range of a minimum and a maximum value.

The “type” of a facet can be controlled with the “type” property. When nothing is configured there, the facet will be threated as option facet.

```
plugin.tx_solr.search.faceting.facets.[faceName].type = [typeName]
```

Valid types could be: options | queryGroup | hierarchy | dateRange | numericRange

In the following paragraphs we will introduce the available facet types in EXT:solr and show how to configure them.

##### Option

The simplest and most often used facet type is the options facet. It renders the items that could be filtered as a simple list.

To setup an simple options facet you can use the following TypeScript snippet:

```
plugin.tx_solr.search {
  faceting = 1
  faceting {
    facets {
      contentType {
        label = Content Type
        field = type
      }
    }
  }
}
```

By using this configuration you create an options facet on the solr field “type” with the name “contentType”. This field represents the record type, that was indexed into solr. Shown in the frontend it will look like this:

## Narrow Search

**Content Type**

- + pages (31)
- + tx\_solr\_file (18)

Fig. 4.1: Options Facet

##### Summary:

Type	options
DefaultPartial	Partials\Facets\Options.html
Domain Classes	Domain\Search\ResultSet\Facets\OptionBased\Options\*

### Grouping by option prefix:

When you have an option facet with very much options you might want to group the options by an prefix of an option. This can be used e.g. to group the options alphabetically.

The following example shows how options can be grouped by prefix (from EXT:solr/Configuration/TypoScript/Examples/Facets/OptionsPrefixGrouped/setup.typoscript):

```
<s:facet.options.group.prefix.labelPrefixes options="{facet.options}" length="1"
↳sortBy="alpha">
  <f:for each="{prefixes}" as="prefix">
    <li>
      {prefix}
      <ul>
        <s:facet.options.group.prefix.labelFilter options="{facet.options}
↳" prefix="{prefix}">
          <f:for each="{filteredOptions}" as="option">
            <li class="facet-option" data-facet-item-value="{option.
↳value}">
              + <a class="facet solr-ajaxified" href="{s:uri.facet.
↳addFacetItem(facet: facet, facetItem: option)}">{option.label}</a>
              <span class="facet-result-count">({option.documentCount}
↳)</span>
            </li>
          </f:for>
        </s:facet.options.group.prefix.labelFilter>
      </ul>
    </li>
  </f:for>
</s:facet.options.group.prefix.labelPrefixes>
```

### Query Group

The query group facet renders an option list, comparable to the options facet, but the single options are not created from plain solr field values. They are created from dynamic queries.

A typical usecase could be, when you want to offer the possibility to filter on the creation date and want to offer options like “yesterday”, “last year” or “more then five years”.

With the following example you can configure a query facet:

```
plugin.tx_solr.search {
  faceting = 1
  faceting {
    facets {
      age {
        label = Age
        field = created
        type = queryGroup
        queryGroup {
          week.query = [NOW/DAY-7DAYS TO *]
          old.query = [* TO NOW/DAY-7DAYS]
        }
      }
    }
  }
}
```

The example above will generate an options facet with the output “week” (for items from the last week) and “old” (for items older then one week).

The output in the frontend will look like this:

An more complex example is shipped with this extension and can be enabled by including the template “Search -

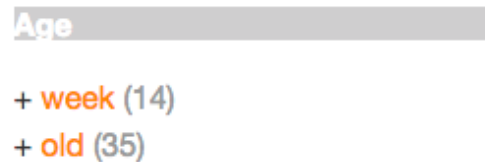


Fig. 4.2: Solr queryGroup facet

**(Example) Fluid queryGroup facet on the field created**”, this example makes also use of renderingInstructions to render nice labels for the facet.

#### Summary:

Type	queryGroup
DefaultPartial	Partials\Facets\Options.html
Domain Classes	Domain\Search\ResultSet\Facets\OptionBased\QueryGroup\*

Hierarchical

With the hierarchical facets you can render a tree view in the frontend. A common usecase is to render a category tree where a document belongs to.

With the following example you render a very simple rootline tree in TYPO3:

```

plugin.tx_solr.search {
    faceting = 1
    faceting {
        facets {
            pageHierarchy {
                field = rootline
                label = Rootline
                type = hierarchy
            }
        }
    }
}

```

The example above just shows a simple example tree that is just rendering the uid’s of the rootline as a tree:

A more complex example, that is rendering the pagetree with titles is shipped in the extension. You can use it by including the example TypoScript **“Search - (Example) Fluid hierarchy facet on the rootline field”**:

#### Summary:

Type	hierarchy
DefaultPartial	Partials\Facets\Hierarchy.html
Domain Classes	Domain\Search\ResultSet\Facets\OptionBased\Hierarchy\*

#### Technical solr background:

Technically the hierarchical facet for solr is the same as a flat options facet. The support of hierarchies is implemented, by writing and reading the facet options by a convention:

```
[depth]-Level1Label/Level2Label/
```

When you follow this convention by writing date into a solr field you can render it as hierarchical facet. As example you can check indexing configuration in EXT:solr (EXT:solr/Configuration/TypoScript/Solr/setup.typoscript)

```

plugin.tx_solr {
    index {
        fieldProcessingInstructions {

```

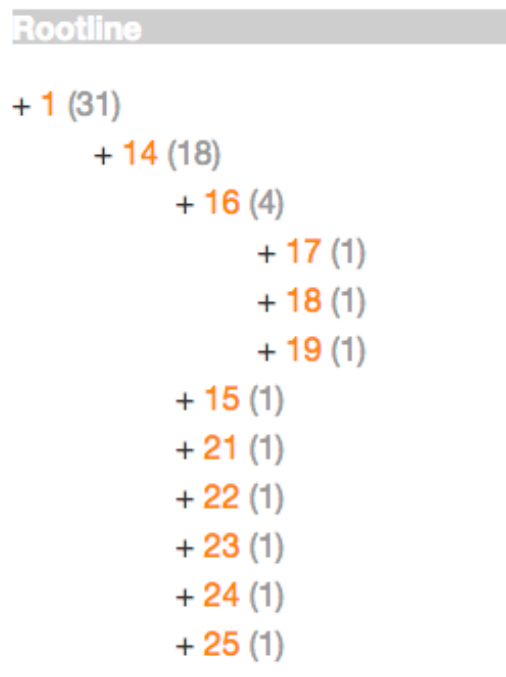


Fig. 4.3: Hierachy facet



Fig. 4.4: Hierachy rootline facet

```

        rootline = pageUidToHierarchy
    }
}

```

In this case the “fieldProcessingInstruction” “pageUidToHierarchy” is used to create the rootline for solr in the conventional way.

### Date Range

When you want to provide a range filter on a date field in EXT:solr, you can use the type “**dateRange**”.

The default partial generates a markup with all needed values in data attributes. Together with the provided jQuery ui implementation you can create an out-of-the-box date range facet.

With the following typscript you create a date range facet:

```

plugin.tx_solr.search {
    faceting = 1
    faceting.facets {
        creationDateRange {
            label = Created Between
            field = created
            type = dateRange
        }
    }
}

```

In the extension we ship the TypoScript example “**Search - (Example) dateRange facet with jquery ui datepicker on created field**” that shows how to configure a dateRange facet and load all required javascript files.

When you include this template a date range facet will be shown in the frontend that we look like this:

The screenshot shows a search interface with a date range facet. The facet is titled "Created Between" and has two input fields. Below the input fields is a calendar for June 2016. The calendar shows dates from 1 to 30. The facet is part of a search results page. The search results are displayed in a list with relevance scores and titles. The first result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The second result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The third result is "Behringen (Germany) to work on TY" with a relevance score of 0. The fourth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The fifth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The sixth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The seventh result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The eighth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The ninth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%. The tenth result is "T3UXW09 - The first TYPO3 User e" with a relevance score of 100%.

Fig. 4.5: EXT:solr dateRange facet

As described before for the date range facet markup and javascript code is required, looking at the example template “**Search - (Example) dateRange facet with jquery ui datepicker on created field**” in “Configuration/TypoScript/Examples/DateRange” you see that for the jQueryUi implementation the following files are included:

```

page.includeJSFooterlibs {
    solr-jquery = EXT:solr/Resources/Public/JavaScript/JQuery/jquery.min.js
    solr-ui = EXT:solr/Resources/Public/JavaScript/JQuery/jquery-ui.min.js
    solr-daterange = EXT:solr/Resources/Public/JavaScript/facet_daterange.js
}

page.includeCSS {
    solr-ui = EXT:solr/Resources/Css/JQueryUi/jquery-ui.custom.css
}

```

## Numeric Range

Beside dates ranges are also usefull for numeric values. A typical usecase could be a price slider for a products page. With the user interface you should be able to filter the documents for a certain price range.

In the default partial, we also ship a partial with data attributes here to support any custom implementation. By default we will use the current implementation from EXT:solr based on jQueryUi.

The following example configures a **numericRange** facet for the field **“pid”**:

```
plugin.tx_solr.search {
    faceting = 1
    faceting.facets {
        pidRangeRange {
            field = pid
            label = Pid Range
            type = numericRange
            numericRange {
                start = 0
                end = 100
                gap = 1
            }
        }
    }
}
```

The numeric range facet requires beside the template also a javascript library to render the slider. The example typoscript template **“Search - (Example) Fluid numericRange facet with jquery ui slider on pid field”** can be used to see the range slider with jQuery ui for the solr field pid by example.

When you configure a facet on the pid field like this, the frontend will output the following facet:



Fig. 4.6: Numeric range facet

Beside the implementation with jQueryUi you are free to implement a range slider with any other javascript framework.

### 4.4.2 Rendering with fluid

Rendering facets with fluid is very flexible, because you can use existing ViewHelpers and implement your own logic in ViewHelpers to support your custom rendering logic.

In the default template the main faceting area on the left side, is done in the following file:

```
Resources/Private/Partials/Frontend/Result/Facets.html
```

This template is used to render only the area for a few facets. The following part is the relevant part where we iterate over the facets:

```
<s:facet.area.group groupName="main" facets="{resultSet.facets.available}">
    <div class="facet-area-main">
        <div class="solr-facets-available secondaryContentSection">
            <div class="csc-header">
                <h3 class="csc-firstHeader">Narrow Search</h3>
            </div>
            <ul class="facets">
```

```

        <f:for each="{areaFacets}" as="facet">
            <li class="facet facet-type facet-type-{facet.type}">
                <f:render partial="Facets/{facet.partialName}"
                    arguments="{resultSet:resultSet, facet:facet}"/>
            </li>
        </f:for>
    </ul>
</div>
</div>
</s:facet.area.group>

```

Looking at the code above we see to important details that are important for solr.

#### Facet Grouping (Areas)

The first important part is the **facet.area.group** ViewHelper. By default all facets in the group **main** will be rendered. This value is the default value.

When you now want to render the facet at another place you can change the group with the following TypoScript configuration:

```

plugin.tx_solr.search {
    faceting = 1
    faceting.facets {
        contentType {
            field = type
            label = Content Type
            groupName = bottom
        }
    }
}

```

Now the facet belongs to another group and will not be rendered in the “main” area anymore.

#### Default Partial

Another important fact is that *Facet->getPartialName()* is used to render the detail partial. The default implementation of a facet will return the default partial, that is able to render this facet.

If you need another rendering for one facet you can overwrite the used partial within the configuration:

```

plugin.tx_solr.search {
    faceting = 1
    faceting.facets {
        contentType {
            field = type
            label = Content Type
            partialName = mySpecialFacet
        }
    }
}

```

Combining all of these concepts together with the flexibility of fluid you are able to render facets in a very flexible way.

## 4.5 Autosuggest

A user of the search typically want to find the results as fast as possible. To support the user and avoid too much typing solr can create a drop down list of common suggested search terms right after the search input box.

This feature can be easily configured with the following typoscript setting:

```

plugin.tx_solr {
    suggest = 1
    suggest {
        numberOfSuggestions = 10
        suggestField = spell
    }
}

```

Beside the server related part EXT:solr ships the jQuery autocomplete implementation to show the suggest results.

The suggest implementation uses the devbridge/jQuery-Autocomplete library(<https://github.com/devbridge/jQuery-Autocomplete>) to render the autocomplete.

If you want to configure an the autosuggest by example, you can include the typoscript example template “**(Example) Suggest/autocomplete with jquery**”.

When everything is configured the frontend will show you a drop down of suggestions when you are typing in the search field:

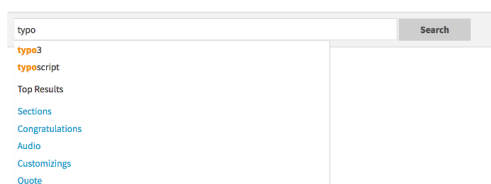


Fig. 4.7: Autocomplete with jQuery

Beside search term suggestions the autocomplete an also show you the top search results for the user input.

This feature can be enabled with:

```

plugin.tx_solr.suggest.showTopResults = 1

```

If you want to change the number of proposed top results you can also configure them:

```

plugin.tx_solr.suggest.numberOfTopResults = 5

```

## 4.6 Sorting

When no sorting is selected the search will order the results by “**relevance**”. This relevance is calculated by many factors and has the goal to deliver the best result for the query on the first position. That’s what you expect from a search :)

For some usecases you want to change the sorting of the results by a certain field. In an onlineshop a user might want to order the results by the price to find the cheapest product that is matching his query.

A simple sorting can be configured with the following typoscript snipped:

```

plugin.tx_solr.search.sorting >
plugin.tx_solr.search {
    sorting = 1
    sorting {
        defaultOrder = asc

        options {
            relevance {
                field = relevance
                label = Relevance
            }
        }
    }
}

```

```

    }
    title {
      field = sortTitle
      label = Title
    }
  }
}

```

With the configuration above the possibility to sort by title is introduced. At the same time the sort by relevance link can be used to reset the sorting to sort by the natural solr relevance.

The screenshot shows a search interface with the following components:

- Sort by:**
  - Relevance (selected)
  - [Title]
- Used facets:**
  - Content Type: pages (31)
  - Remove all filters
- Narrow Search:**
  - Content Type
  - + pages (31)
  - Rootline
  - + Congratulations (31)
    - + Content Examples (18)
    - + News (4)
- Search Input:** \*
  - Parsed Query:** (+MatchAllDocsQuery(\*:\*) 0)/no\_coord
  - Searched for "\*" . Found 31 results in 12 milliseconds. Displayir
  - Results per page: 10
  - Page navigation: 1 | 2 | 3 | 4 | »
- Search Results:**
  - Any language, any character
  - Relevance: 100%
  - TYPO3 Speaks Your Language TYPO3 supports all langu frontend, backend and database interactions run U
  - Community

Fig. 4.8: Search with sorting

## Templating

The rendering of the sorting is done on “Resources/Private/Partials/Results/Sorting.html” this partial is using the configuration and the view helpers to generate sorting links with the same behaviour as in ext:solr. For sure you can modify this template and use the ViewHelpers in the way how you want to implement your custom sorting.

## 4.7 Results per Page

EXT:solr allows you to configure how many result per page will be shown and at the same time the user can also change this value to an allowed value.

The following configuration can be used to configured the results per page:

```

plugin.tx_solr {
  search {
    results {
      resultsPerPage = 6
      resultsPerPageSwitchOptions = 12, 18, 24
    }
  }
}

```

When you apply the configuration above, the frontend will show 6 search results by default and show the options 12, 18 and 24 to the user to change the amount of visible results

## Templating

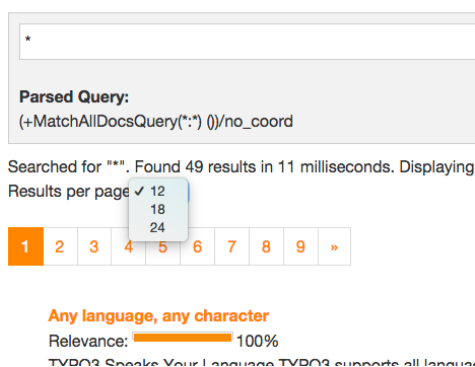


Fig. 4.9: Results per page

The rendering of the “perPage selector” is done on “Resources/Private/Partials/Frontend/Results/PerPage.html”. This partial is build in a way that the behaviour of the perPage selector is the same as in EXT:solr. If you want to do your custom rendering for example with links instead of a for, you can customize the rendering there.

## 4.8 Ajaxified Results

To improve the use experience and the performance it is possible to load most of the sub requests with ajax.

To activate the “**ajaxification**” you need to include the typoscript template “**Search - Ajaxify the searchresults with jQuery**”

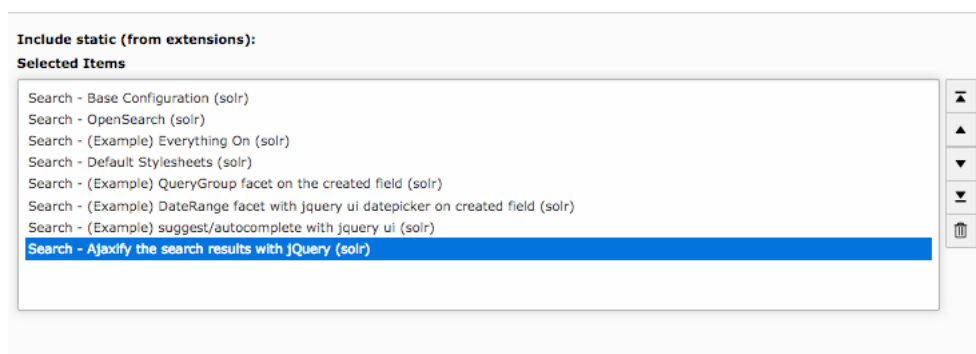


Fig. 4.10: Include EXT:solr ajaxify template

### 4.8.1 How it works?

For all links with the css class “**solr-ajaxified**” the javascript search controller triggers the request against the same search page but with the type “7383” which is just rendering the search request. The response is replacing everything in the container “div.tx\_solr” with the content of the response.

### 4.8.2 Limitations

Since the example only renders the plugin on a specific page type and not the same plugin instance as on the page, settings from the flexform are not taken into account by now.

## 4.9 Customize

### 4.9.1 Use custom Fluid Templates

After these steps solrfluid is usable and using the default Templates, Layouts and Partials. If you want to overwrite them, you can change the TypoScript configuration:

```
plugin.tx_solr {
    view {
        layoutRootPaths.10 = EXT:yourpath/Layouts/
        partialRootPaths.10 = EXT:yourpath/Partials/
        templateRootPaths.10 = EXT:yourpath/Templates/
    }
}
```

Now you can copy the default partials from the extension to your project path and adapt them to your needs.

## 4.10 Languages

We recommend to create one solr core per language. The shipped solr example configuration provides a setup for the following languages:

- Arabic (core\_ar)
- Armenian (core\_hy)
- Basque (core\_eu)
- Brazilian portuguese (core\_ptbr)
- Bulgarian (core\_bg)
- Burmese (core\_my)
- Catalan (core\_ca)
- Chinese (core\_zh)
- Czech (core\_cs)
- Danish (core\_da)
- Dutch (core\_nl)
- English (core\_en)
- Finnish (core\_fi)
- French (core\_fr)
- Galician (core\_gl)
- German (core\_de)
- Greek (core\_el)
- Hindi (core\_hi)
- Hungarian (core\_hu)
- Indonesian (core\_id)
- Irish (core\_ie)
- Italian (core\_it)
- Japanese (core\_ja)
- Khmer (core\_km)
- Korean (core\_ko)
- Lao (core\_lo)
- Latvia (core\_lv)
- Norwegian (core\_no)
- Persian (core\_fa)

- Polish (core\_pl)
- Portuguese (core\_pt)
- Romanian (core\_ro)
- Russian (core\_ru)
- Serbian (core\_rs)
- Spanish (core\_es)
- Swedish (core\_sv)
- Thai (core\_th)
- Turkish (core\_tr)
- Ukrainian (core\_uk)

The configuration of the connection between solr cores and sites is done in typoscript.

The following typoscript snippet shows an example how to configure multiple languages for the introduction package (EN, DE and DA):

```
plugin.tx_solr.solr {
    scheme = http
    port   = 8082
    path   = /solr/core_en/
    host   = localhost
}

[globalVar = GP:L = 1]
plugin.tx_solr.solr.path = /solr/core_de/
[end]

[globalVar = GP:L = 2]
plugin.tx_solr.solr.path = /solr/core_da/
[end]
```

After setting up the languages with typoscript you need to initialize the solr connections with the connection manager (*ConnectionManager*).

# ROUTING

This part describes the routing part of EXT:solr.

The configuration of **routing** is part of your site configuration.

---

**Note:** Currently the configuration over the **site module** is not supported.

---

## 5.1 Configure Routing

Currently only one route enhancer exists. It's purpose is to mask facets inside the query string or as part of the *path segment*.

The basement for routing is the enhancer *SolrFacetMaskAndCombineEnhancer*. Open your site configuration with an editor of your choice.

Locate the section of route enhancer *routeEnhancers*. If section available, add *routeEnhancers* to your configuration.

Use enhancer *SolrFacetMaskAndCombineEnhancer* as type of your route, and limit it to pages where the route should apply.

The extension key have to be set to *tx\_solr*.

Solr specific configuration will placed inside of key *solr*.

The following example shows a the basement of the enhancer configuration.

```
routeEnhancers:
  products:
    type: SolrFacetMaskAndCombineEnhancer
    limitToPages:
      - 42
    extensionKey: tx_solr
    solr:
```

If you use something else as *tx\_solr* for the plugin namespace (see *tx\_solr:view*) you need additional configuration.

Change the *extensionKey* from *tx\_solr* to your plugin namespace.

```
routeEnhancers:
  products:
    type: SolrFacetMaskAndCombineEnhancer
    limitToPages:
      - 42
    extensionKey: search
```

The next step is to configure a path segment or to mask the facets inside of the query.

## 5.2 Facets in path segments

This chapter describe how you can use a facet as part of your url path.

Imagine you have an online shop and use Solr to display the products. It would be convenient for the customer if can call an url path like */products/candy*.

The first step is to create a site */products* and place the Solr plugin as content.

### 5.2.1 Configure the path segment

In our example we are using facet *productType* to filter the search result for a specific product type.

The first step is to define a route path. Because we have already a side called */products* only need to define a path contain the facet.

The name itself needs no connection to the facet, so you can choose something different.

```
routeEnhancers:
  products:
    routePath: '{productType}'
```

The next step is to map the variable to the facet itself.

### 5.2.2 Map the variable to the facet

The mapping from variable to facet differs from the standard as you know from TYPO3 or symfony.

A facet inside of the query is a composition of facet and value.

Example:

```
/products/?tx_solr[filter][0]=taste:matcha&tx_solr[filter][1]=productType:candy&tx_solr[filter][2]=color:yellow&tx_solr[filter]
```

This example shows another issues:

- there is not specific order of facets
- a facet can contains multiple values

Define a query path would not work in this case.

The solution is to define a part of a query path and attach the facet you want to place inside of the url.

This is done by separating the query path and the facet by a dash.

```
routeEnhancers:
  products:
    # Note: All arguments inside of namespace tx_solr. See -> extensionKey
    # Example: Argument 'type' define as 'filter-type' will convert into 'tx_solr/
    ↪filter-type'
    _arguments:
      productType: filter-productType
    requirements:
      productType: '.*'
```

The route enhancer now knows to place values of facet *productType* as path segment.

As result the URL now changed into

```
/products/candy/?tx_solr[filter][0]=taste:matcha&tx_solr[filter][1]=color:yellow&tx_solr[filter][2]=color:green&tx_solr[filter]
```

---

**Important:** The name used as argument name have to match the name of the Solr filter.

---

---

**Important:** We recommend to configured the requirements for a variable with `.*`. If a value is required it will lead to an exception if not type is omitted.

---

### 5.2.3 Handling of multiple values

As the customer can combine as many values of a facet to filter the result, the path segment can contain multiple value.

The route enhancer will collect all values of the configured facet and combine them to a single string.

The values will sort alphanumeric and concat with a colon.

You can change the value separator by configuring a multi value separator:

```
routeEnhancers:
  products:
    solr:
      multiValueSeparator: ';'

```

Additional you can replace specific characters inside of each value using a map to replace the characters:

```
routeEnhancers:
  products:
    solr:
      replaceCharacters:
        ' ': '-'

```

---

**Important:** If you replace characters, please take care that the target character is not a character, which could be a part of the facet value.

---

Now lets have a look at the effect.

Before the configuration we had this URL:

```
/products/?tx_solr[filter][0]=taste:matcha&tx_solr[filter][1]=productType:dark+chocolate&tx_solr[filter][2]=taste:sweet&tx_so
```

After applying the configuration, the URL changed into:

```
/products/candy;dark-chocolate?tx_solr[filter][0]=taste:matcha&tx_solr[filter][1]=taste:sweet
```

### 5.2.4 Full example

This example shows the all configuration done above

```
routeEnhancers:
  products:
    type: SolrFacetMaskAndCombineEnhancer
    limitToPages:
      - 42
    extensionKey: tx_solr
    routePath: '/{productType}'
    # Note: All arguments inside of namespace tx_solr. See -> extensionKey
    # Example: Argument 'type' define as 'filter-type' will convert into 'tx_solr/
    ↪filter-type'
    _arguments:
      productType: filter-productType
      # Important: Configure requirement for fields! If you want to allow empty_
    ↪values, set .*
    requirements:
      productType: '.*'
    solr:

```

```
multiValueSeparator: ';'
replaceCharacters:
  ' ': '-'
```

## 5.3 Simplify facets inside of the query

Sometimes you or your customer want to share links to a search result. The link itself could really hard to read, a specially if it contains a lot of filters.

There are two options that you can apply on the query string:

1. Concat multiple values of facet into a single string
2. Mask the filter inside of the query

All query related configurations will be placed below node *query* below node *solr*:

```
routeEnhancers:
  products:
    solr:
      query:
```

### 5.3.1 Concat multiple values into a string

To activate the concatenation of multiple values add the *concat* entry and set the value to *true*.

By default the values will concat with a colon. If you need a different separator, add the entry *valueSeparator* and set a value that fits your need.

```
routeEnhancers:
  products:
    solr:
      query:
        concat: true
        # valueSeparator: ','
```

Before Solr concatenates the values, they will be sorted in alphanumeric matter.

Imaging following filter:

```
tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_solr[filter][2]=taste:matcha
```

By enabling the *concat* of multiple values, it would change into:

```
tx_solr[filter][0]=taste:matcha,sour,sweet
```

### 5.3.2 Mask filter inside of the query

Mask filter inside of the URL allows you to make the URL more readable and to shrink the length.

The configuration contains two parts:

1. enable the mask
2. map from the facet name to parameter (see *faceting.facets.[facetName] - single facet configuration*)

Add the entry *mask* with the value *true* to the query configuration.

Add the node *map* and configure the mapping.

The value of the map defines the facet key, the value the parameter that will be used inside of the URL.

```
routeEnhancers:
  products:
    solr:
```

```

query:
  mask: true
  map:
    taste: taste

```

Imaging following filter:

```
tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_solr[filter][2]=taste:matcha
```

By enabling the *concat* of multiple values, it would change into:

```
taste=matcha,sour,sweet
```

---

**Tip:** The facet and the “target” can be equal, you may use same names.

---



---

**Note:** By enabling the mask option, the concat option applied automatically!

---



---

**Note:** The mask only apply to facet you configure inside of the map.

---



---

**Important:** Some facet names are excluded from mask until you configure a different parameter name. This are the internal/reserved parameters of TYPO3. \* type \* id \* no\_cache \* cHash \* MP

---

### 5.3.3 Full example

This example shows all configurations together, which were done above in step by step:

```

routeEnhancers:
  products:
    solr:
      query:
        # To reduce the amount of parameters you can force Solr to concat the
        ↪values.
        # For example you have following filter:
        #   tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_
        ↪solr[filter][2]=taste:matcha
        #
        # Concat will:
        # 1. collect all filters of the same type
        # 2. will sort all filter values alpha numeric
        # 3. join the values together
        #
        # As a result the query will modified into:
        #   tx_solr[filter][0]=taste:matcha,sour,sweet
        #
        # Note: If you active the mask option, the concat feature turn on
        ↪automatically
        #
        concat: true
        # valueSeparator: ','

        # You can tell Solr to mask query facets. This feature require the map
        ↪below
        #
        # For example you have following filter:
        #   tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_
        ↪solr[filter][2]=taste:matcha

```

```

# Mask will:
# 1. implode all values into a single string and sort it -> green,red,
→yellow
# 2. replace tx_solr[filter][]=color: with color=
#
# As a result the query will modified into:
# taste=matcha,sour,sweet
#
mask: true

# In order to simplify a filter argument, you have to define a
→corresponding map value
# There is no automatically reduction of filter parameters at the moment
→available.
# The key is the name of your facet, the value what use instead.
#
# Important:
# There are some restrictions for the values. The use of TYPO3 core
→parameters is prohibited.
# This contains at the moment following strings: no_cache, cHash, id, MP,
→type
map:
  taste: taste

```

## 5.4 Example

```

routeEnhancers:
  Products:
    type: SolrFacetMaskAndCombineEnhancer
    limitToPages:
      - 10
    extensionKey: tx_solr
    solr:
      multiValueSeparator: '+'
      replaceCharacters:
        ' ': '_'
      query:
        # To reduce the amount of parameters you can force Solr to concat the
→values.
        # For example you have following filter:
        # tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_
→solr[filter][2]=taste:matcha
        #
        # Concat will:
        # 1. collect all filters of the same type
        # 2. will sort all filter values alpha numeric
        # 3. join the values together
        #
        # As a result the query will modified into:
        # tx_solr[filter][0]=taste:matcha,sour,sweet
        #
        # Note: If you active the mask option, the concat feature turn on
→automatically
        #
        concat: true
        # valueSeparator: ','

        # You can tell Solr to mask query facets. This feature require the map
→below
        #
        # For example you have following filter:

```

```

# tx_solr[filter][0]=taste:sweet&tx_solr[filter][1]=taste:sour&tx_
↳solr[filter][2]=taste:matcha
# Mask will:
# 1. implode all values into a single string and sort it -> green,red,
↳yellow
# 2. replace tx_solr[filter][]=color: with color=
#
# As a result the query will modified into:
# taste=matcha,sour,sweet
#
mask: true

# In order to simplify a filter argument, you have to define a
↳corresponding map value
# There is no automatically reduction of filter parameters at the moment
↳available.
# The key is the name of your facet, the value what use instead.
#
# Important:
# There are some restrictions for the values. The use of TYPO3 core
↳parameters is prohibited.
# This contains at the moment following strings: no_cache, cHash, id, MP,
↳type

map:
  color: color
  taste: taste
  product: product
routePath: '{type}'
# Note: All arguments inside of namespace tx_solr. See -> extensionKey
# Example: Argument 'type' define as 'filter-type' will convert into 'tx_solr/
↳filter-type'
_arguments:
  type: filter-type
requirements:
  type: '.*'

```



## LOGGING

When you need to debug something in EXT:solr the extension allows you to write several information to the TYPO3 logging framework.

This can be helpful to analyze e.g.:

- What is happening during the indexing?
- What is going when a search in the frontend is triggered?

### 6.1 Configure Logging

There are several options that can be configured with TypoScript:



Fig. 6.1: EXT:solr logging settings

You can find a detailed description of all options in the “*tx\_solr.logging*” section in the reference.

**Note:** Make sure that you log on production only what you need, because log data can increase very quickly.

In the next steps we want to see as example how we can use the debug output to see which query was triggered in solr.

The first step is to debug the output for “rawGet”:

```
plugin.tx_solr.logging.query.rawGet = 1
```

### 6.2 Show Logging Output

As written in the introduction, the logging framework functionally is used to write the log entries.

For a quick debugging without any extension there is the possibility to show the debug messages directly:

- For the frontend as formatted output.

- For the backend as TYPO3 console output.

**Note:** You should use this on a development system only and make sure that the devIPmask does not allow other users to see the debug output.

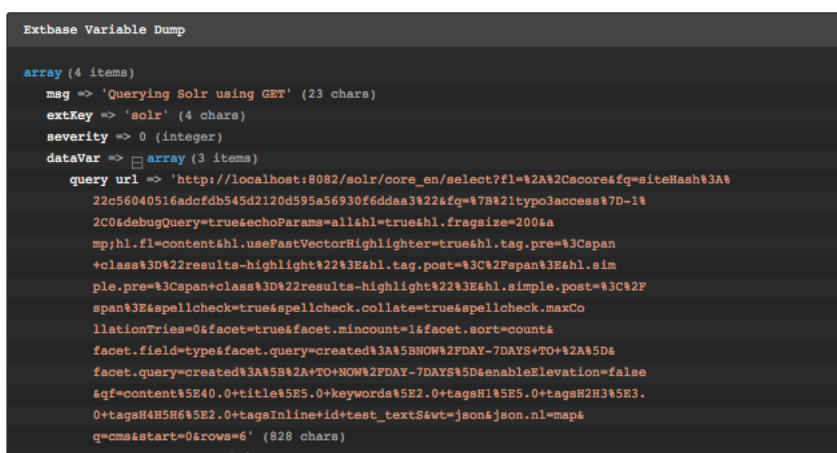
To enable this features you need to:

- Make sure that your ip address is configured to match the devIPMask (\$GLOBALS['TYPO3\_CONF\_VARS']['SYS']['devIPmask'])
- Enable the debug output in the EXT:solr typoscript:

```
plugin.tx_solr.logging.debugOutput = 1
```

You can now see the written log in the frontend:

Querying Solr using GET:



```
Extbase Variable Dump

array (4 items)
  msg => 'Querying Solr using GET' (23 chars)
  extKey => 'solr' (4 chars)
  severity => 0 (integer)
  dataVar => array (3 items)
    query url => 'http://localhost:8082/solr/core_en/select?fl=*%2C%2Cscore&fq=siteHash%3A%22c56040516adcfdb545d2120d595a56930f6ddaa3%22&fq=%3B%21typo3access%7D-1%2C0%debugQuery=true&echoParams=all&hl=true&hl.fragSize=200&mp;hl.fl=content&hl.useFastVectorHighlighter=true&hl.tag.pre=%3Cspan+class%3D%22results-highlight%22%3E&hl.tag.post=%3C%2Fspan%3E&hl.simple.pre=%3Cspan+class%3D%22results-highlight%22%3E&hl.simple.post=%3C%2Fspan%3E&spellcheck=true&spellcheck.collate=true&spellcheck.maxCollationTries=0&facet=true&facet.mincount=1&facet.sort=count&facet.field=type&facet.query=created%3A%5BNOW%2FDAY-7DAYS+TO+%2A%5D&facet.query=created%3A%5B%2A+TO+NOW%2FDAY-7DAYS%5D&enableElevation=false&qf=content%5E40.0+title%5E5.0+keywords%5E2.0+tagsH1%5E5.0+tagsH2H3%5E3.0+tagsH4H5H6%5E2.0+tagsInline+id+test_text&wt=json&json.nl=map&q=cms&start=0&rows=6' (828 chars)
    RESPONSE => array (5 items)
```

Fig. 6.2: EXT:solr frontend debug output

# THE APACHE SOLR SERVER

The other chapters focused on the frontend or backend part of the extension. In this part we want to focus on the server part of apache solr.

## 7.1 Configuration Structure

The configuration can be found in the folder “Resources/Private/Solr”.

This folder contains:

- The folder “configsets”: This folder a set of configuration files that can be deployed into a solr server, as a template.

It contains the “solrconfig.xml” file, the “schema.xml” files for all languages and the accessfilter library that belongs to this version as a jar file. This configSet needs to be in place on a solr server to create cores that are compatible to the EXT:solr extension.

- The folder “cores”: This folder ships an example “core.properties” file for all languages that are compatible with EXT:solr.

A “core.properties” file references a “configSet” that should be used. The path to the schema that is bound to a core is configured as “schema” relative to the root folder of the “configSet”.

By example a “core.properties” file looks like this:

```
configSet=ext_solr_6_0_0
schema=german/schema.xml
name=core_de
dataDir=../../data/german
```

- The solr.xml file: This file configures solr as required for the used Apache Solr version.

### 7.1.1 The EXT:solr configSet

As mentioned before the configSet is one single package, that contains all to customize a plain Apache Solr Server, to an Apache Solr Server, ready for EXT:solr & TYPO3.

The configset of the current release is located in “Resources/Private/Solr/configsets/ext\_solr\_<release>”.

Inside the configSet you find the following folders:

- conf: This folder contains the solr configuration and all schemata files. There is one directory for each language which ships the schema.xml file for this language.

The schema.xml file contains the language specific adaptations and includes all general schema fields and types with an XInclude statement.

```
<!-- xinclude fields -->
<xi:include href="../../general_schema_types.xml" xmlns:xi="http://www.w3.org/2001/
->XInclude"/>
```

```
<!-- xinclude fields-->
<xi:include href="../../general_schema_fields.xml" xmlns:xi="http://www.w3.org/2001/
  xmlns:xinclude="http://www.w3.org/2001/xinclude"/>
```

- **typo3lib:** This folder ships the compiled access filter jar file, that should be used with this EXT:solr version. The solrconfig (conf/solrconfig.xml) is configured to load all jar files from typo3lib.

## 7.2 Setup steps

With the extension we ship an installer for development and a docker images that can be used to install solr.

When you want to install solr on your system in another way the following steps are required.

- Install the solr server
- Copy the configsets into the configset folder (by default \$SOLR\_HOME/server/solr/configsets)
- Make sure that the solr.xml file (\$SOLR\_HOME/server/solr/solr.xml) is in place and fits to your solr version
- Create an init script that start solr on boottime.
- Secure your solr port from outside.
- Make sure that solr is running with an own user.
- Backup your data folders

*Hint:* Apache Solr ships an install script in newer version that might cover your requirements for production (\$SOLR\_HOME/bin/install\_solr\_service.sh). We don't use it in EXT:solr because there are currently problems when using it with ubuntu xenial (16.04)

## 7.3 Index Maintenance

Solr offers a lot of request handlers to do maintenance tasks.

### 7.3.1 Committing pending documents

```
curl http://host:port/solr-path/update -H "Content-Type: text/xml"
  --data-binary '<commit />'
```

### 7.3.2 Clearing the index

```
curl http://host:port/solr-path/update -H "Content-Type: text/xml"
  --data-binary '<delete><query>*:*/</query></delete>'

curl http://host:port/solr-path/update -H "Content-Type: text/xml"
  --data-binary '<commit />'
```

### 7.3.3 Optimizing the index

This is no longer needed. The old scheduler task have also been removed.

### 7.3.4 Searching the index from the command line

Parameters:

- q** what to search for. Format: fieldName:fieldValue
- qt** defines the query type, for the command line we recommend "standard", the extension itself uses "dismax"
- fl** comma separated list of fields to return

**rows** number of rows to return

**start** offset from where to return results

```
curl 'http://host:port/path-to-solr/select?q=hello&qt=standard&fl=title,content'
```

### 7.3.5 Getting information / statistics about the index

```
curl 'http://host:port/path-to-solr/admin/luke'
```

### 7.3.6 Create cores with the core admin api

The CoreAdmin API (<https://cwiki.apache.org/confluence/display/solr/CoreAdmin+API>) allows you, manipulate the cores in your solr server.

Since we support configSets a core could be generated with the following http call:

```
curl 'http://host:port/path-to-solr/admin/cores?action=CREATE&name=core_de&
↳configSet=ext_solr_8_0_0&schema=german/schema.xml&dataDir=../../data/german'
```

## 7.4 SolrConfig Parameters

There are several parameters in the solrconfig.xml that can be used to tune your solr server. Our solrconfig.xml is designed to ship a reasonable configuration for the most standard use cases.

For use cases with very large indexes or high performance requirements it makes sense to tune those parameters

### 7.4.1 indexConfig.useCompoundFile

This value is “true” by default in our configuration. By setting this value to true solr only writes one file for indexes instead of many. This is a little bit slower but more robust to prevent errors with “Too many open files”.



## CONFIGURATION REFERENCE

### 8.1 tx\_solr

This section defines general configuration options.

- *enabled*
- *enableDebugMode*

#### 8.1.1 enabled

**Type** Boolean

**TS Path** plugin.tx\_solr.enabled

**Default** 1

**Options** 0, 1

**Since** 1.2

A switch to completely turn on / off EXT:solr. Comes in handy with multi site installations where you want to enable EXT:solr only for certain sites, but still have the extension's configuration at a single place and include that for each site. Just set enabled = 0 for each site's root TS template or use conditions where you do not want EXT:solr.

---

**Important:** This also influences the connection manager; connections will be registered / detected only for enabled = 1

---

#### 8.1.2 enableDebugMode

**Type** Boolean

**TS Path** plugin.tx\_solr.enableDebugMode

**Default** 0

**Options** 0, 1

**Since** 1.0

**See** <http://wiki.apache.org/solr/CommonQueryParameters#debugQuery>

If enabled, the debugQuery query parameter is added to the Solr queries. Solr will then return additional information explaining the the query, scoring, timing, and other information.

## 8.2 tx\_solr.general

This section defines general settings.

- `dateFormat.date`

### 8.2.1 dateFormat.date

**Type** String

**TS Path** plugin.tx\_solr.general.dateFormat.date

**Default** d.m.Y H:i

**Since** 1.0

**See** <http://www.php.net/manual/de/function.strftime.php>

Defines the format that is used for dates throughout the extension like in view helpers for example. The format uses the `strftime()` php function syntax, please consult the php documentation for available options.

## 8.3 tx\_solr.view

All view related settings, these settings might also be relevant for Fluid.

### 8.3.1 pluginNamespace

**Type** String

**TS Path** plugin.tx\_solr.view.pluginNamespace

**Since** 7.0

**Default** tx\_solr

Plugin namespace. Can be used to change the plugin namespace and can be changed by instance in the flexform.

### 8.3.2 templateFiles

By convention the templates is loaded from `EXT:solr/Resources/Private/Templates/Frontend/Search/(ActionName).html`. If you want to define a different entry template, you can do this here to overwrite the conventional default template. If you want to use FLUID fallbacks you can just configure the template name, otherwise you could also use a full reference `EXT:/.../`.

The templates that you configure in `availableTemplate` can be used in the flexform by the editor to select a template for the concrete plugin instance.

### 8.3.3 templateFiles.results

**Type** String

**TS Path** plugin.tx\_solr.view.templateFiles.results

**Since** 7.0 (Replaces previous setting `plugin.tx_solr.templateFiles.result`)

**Default** Results

By convention the “Results” template from you configured FLUID template path will be used As alternative you can configure a different template name here (e.g. MyResults or a full path to an entry template here).

8.3.4 `templateFiles.results.availableTemplates`**Type** Array**TS Path** `plugin.tx_solr.view.templateFiles.results.availableTemplates`**Since** 7.0**Default** none

Allows to configure templates that are available in the flexform to switch.

Example:

```
plugin.tx_solr.view.templateFiles.results.availableTemplates {
  default {
    label = Default Searchresults Template
    file = Results
  }
  finder {
    label = Productfinder Template
    file = ProductFinder
  }
}
```

8.3.5 `templateFiles.form`**Type** String**TS Path** `plugin.tx_solr.view.templateFiles.form`**Since** 7.0 (Replaces previous setting `plugin.tx_solr.templateFiles.form`)**Default** Form

By convention the “Form” template from you configured FLUID template path will be used . As alternative you can configure a different template name here (e.g. MyForm or a full path to an entry template here).

8.3.6 `templateFiles.form.availableTemplates`**Type** Array**TS Path** `plugin.tx_solr.view.templateFiles.form.availableTemplates`**Since** 7.0**Default** none

Allows to configure templates that are available in the flexform to switch.

Example:

```
plugin.tx_solr.view.templateFiles.form.availableTemplates {
  default {
    label = Default Searchform Template
    file = Form
  }
  specialform {
    label = Extended Search Form
    file = BetterForm
  }
}
```

### 8.3.7 templateFiles.frequentSearched

**Type** String

**TS Path** plugin.tx\_solr.view.templateFiles.frequentSearched

**Since** 7.0 (Replaces previous setting plugin.tx\_solr.templateFiles.frequentSearched)

**Default** FrequentlySearched

By convention the “FrequentlySearched” template from you configured FLUID template path will be used. As alternative you can configure a different template name here (e.g. FrequentlySearched or a full path to an entry template here).

## 8.4 tx\_solr.solr

**Warning:** The ability to use the legacy mode will be removed in EXT:solr 11.0. please configure your solr connections together with your TYPO3 site in the site module

This section defines the address of the Solr server. As the communication with the Solr server happens over HTTP this is just a simple URL. Each of the URL's components can be defined separately.

**Note:** Since version 9 of EXT:solr you can optionally configure different endpoints for reading and writing

```
plugin.tx_solr.solr {
    read {
        scheme = https
        host = localhost
        port = 8983
        path = /solr/core_en/
    }
    write < .read
}
```

As fallback (when nothing special is configured in read or write, EXT:solr is fallingback to the old global setting)

Example:

- When nothing is configured in `plugin.tx\_solr.solr.read.host` the path `plugin.tx\_solr.solr.host` is used.

- *scheme*
- *host*
- *port*
- *path*
- *username*
- *password*
- *timeout*

#### 8.4.1 scheme

**Type** String

**TS Path** plugin.tx\_solr.solr.scheme

**Default** http

**Options** http, https

**cObject supported** yes

**Since** 1.2 2.0

**Deprecated** 10.0

Allows to set the connection scheme to “https” instead of the default “http”.

#### 8.4.2 host

**Type** String

**TS Path** plugin.tx\_solr.solr.host

**Default** localhost

**cObject supported** yes

**Since** 1.0

**Deprecated** 10.0

Sets the host portion of the URL.

#### 8.4.3 port

**Type** Integer

**TS Path** plugin.tx\_solr.solr.port

**Default** 8983

**cObject supported** yes

**Since** 1.0

**Deprecated** 10.0

Sets the port portion of the URL.

#### 8.4.4 path

**Type** String

**TS Path** plugin.tx\_solr.solr.path

**Default** /

**cObject supported** yes

**Since** 1.0

**Deprecated** 10.0

Sets the path portion of the URL. Make sure to have the path end with a slash (/).

#### 8.4.5 username

**Type** String

**TS Path** plugin.tx\_solr.solr.username

**Since** 6.0

**cObject supported** yes

**Deprecated** 10.0

Sets the username required to access the solr server.

#### 8.4.6 password

**Type** String

**TS Path** plugin.tx\_solr.solr.password

**Since** 6.0

**cObject supported** yes

**Deprecated** 10.0

Sets the password required to access the solr server.

#### 8.4.7 timeout

**Type** Float

**TS Path** plugin.tx\_solr.solr.timeout

**Default** 0.0

**Since** 1.0

**cObject supported** no

**Deprecated** in 10.0 removed in 11.1.

Now the \$GLOBALS['TYPO3\_CONF\_VARS']['HTTP'] can be used to configure a connection timeout and other options.

### 8.5 tx\_solr.index

This part contains all configuration that is required to setup your indexing configuration. You can use EXT:solr to easily index pages or any kind of records of your TYPO3 CMS.

- *additionalFields (deprecated)*
- *fieldProcessingInstructions*
- *queue*
- *queue.[indexConfig]*
- *queue.[indexConfig].additionalWhereClause*
- *queue.[indexConfig].initialPagesAdditionalWhereClause*
- *queue.[indexConfig].additionalPageIds*
- *queue.[indexConfig].table*
- *queue.[indexConfig].initialization*
- *queue.[indexConfig].indexer*
- *queue.[indexConfig].indexingPriority*
- *queue.[indexConfig].fields*
- *queue.[indexConfig].attachments.fields*
- *queue.[indexConfig].recursiveUpdateFields*
- *queue.pages.excludeContentByClass*
- *queue.pages.allowedPageTypes*
- *queue.pages.indexer.authorization.username*

- `queue.pages.indexer.authorization.password`
- `queue.pages.indexer.frontendDataHelper.scheme`
- `queue.pages.indexer.frontendDataHelper.host`
- `queue.pages.indexer.frontendDataHelper.path`
- **Indexing Helpers**
  - `SOLR_CONTENT`
  - `SOLR_MULTIVALUE`
  - `SOLR_RELATION`
  - `SOLR_CLASSIFICATION`
- `enableCommits`

Allows to prevent frontend indexing of pages when a backend editor is logged in and browsing the website.

### 8.5.1 additionalFields (deprecated)

**Type** String, cObject (since 1.1)

**TS Path** `plugin.tx_solr.index.additionalFields`

**Since** 1.0

**Deprecated** 2.0

A mapping of Solr field names to additional string values to be indexed with page documents. Use dynamic fields to index additional data, this way you don't have to modify the `schema.xml`

Example:

```
plugin.tx_solr.index.additionalFields {
    myFirstAdditionalField_stringS = some string

    mySecondAdditionalField_stringS = TEXT
    mySecondAdditionalField_stringS {
        value = some other value that can be constructed using any TypoScript cObject
        case = upper
        // more processing here as needed
    }
}
```

Since version 1.1 you can use cObjects to generate the value for the field. The only thing to observe is that you generate strings. Other values may work, but haven't been tested yet.

Deprecated since 2.0, please use the Index Queue indexing configurations instead as it allows you to define more precisely for which types of documents you want which fields to be indexed.

### 8.5.2 fieldProcessingInstructions

**Type** cObject

**TS Path** `plugin.tx_solr.index.fieldProcessingInstructions`

**Since** 1.2 2.0

**Options** `timestampToIsoDate`, `uppercase`, `pathToHierarchy` (2.5-dkd), `pageUidToHierarchy` (2.5-dkd)

Assigns processing instructions to Solr fields during indexing (Syntax: Solr index field = processing instruction name). Currently it is not possible to extend / add own processing instructions. Before documents are sent to the Solr server they are processed by the field processor service. Currently you can make a field's value all uppercase,

convert a UNIX timestamp to an ISO date, or transform a path into a hierarchy for hierarchical facets (2.0 only). Currently you can use only one processing instruction at a time.

Example:

```
fieldProcessingInstructions {
    changed = timestampToIsoDate
    created = timestampToIsoDate
    endtime = timestampToIsoDate
}
```

### 8.5.3 queue

The Index Queue is a powerful feature introduced with version 2.0. It allows you to easily index any table in your TYPO3 installation by defining a mapping of SolrFieldName = DatabaseTableNameOrContentObject. The table must be configured / described in TCA, though. To index other, external data sources you might want to check out Solr's Data Import Handler (DIH).

The Index Queue comes preconfigured to index pages (enabled by default) and an example configuration for tt\_news (provided as a separate TypoScript template).

**Type** Array

**TS Path** plugin.tx\_solr.index.queue

**Since** 2.0

**Default** pages

Defines a set of table indexing configurations. By convention the name of the indexing configuration also represents the table name. You can name the indexing configuration differently though by explicitly defining the table as a parameter within the indexing configuration. That's useful when indexing records from one table with different configuration - different single view pages / URLs for example.

Example:

```
// enables indexing of tt_news records
plugin.tx_solr.index.queue.news = 1
plugin.tx_solr.index.queue.news.fields {
    abstract = short
    author = author
    description = short
    title = title

    // the special SOLR_CONTENT content object cleans HTML and RTE fields
    content = SOLR_CONTENT
    content {
        field = bodytext
    }

    // the special SOLR_RELATION content object resolves relations
    category_stringM = SOLR_RELATION
    category_stringM {
        localField = category
        multiValue = 1
    }

    // the special SOLR_MULTIVALUE content object allows to index multivalue fields
    keywords = SOLR_MULTIVALUE
    keywords {
        field = keywords
    }

    // build the URL through typolink, make sure to use returnLast = url
    url = TEXT
```

```

url {
    typolink.parameter = {$plugin.tt_news.singlePid}
    typolink.additionalParams = &tx_ttnews[tt_news]={field:uid}
    typolink.additionalParams.insertData = 1
    typolink.returnLast = url
    typolink.useCacheHash = 1
}

sortAuthor_stringS = author
sortTitle_stringS = title
}

```

#### 8.5.4 queue.[indexConfig]

**Type** Boolean, Array

**TS Path** plugin.tx\_solr.index.queue.[indexConfig]

**Since** 2.0

**Default** pages

An indexing configuration defines several parameters about how to index records of a table. By default the name of the indexing configuration is also the name of the table to index.

By setting `plugin.tx_solr.index.queue.[indexConfig] = 1` or `0` you can en- / disable an indexing configuration.

**Note:** you could add `L={field:__solr_index_language}` in the `additionalParams` of the `typolink` to link to the correct language version (this was removed from the example above to simplify the example)

#### 8.5.5 queue.[indexConfig].additionalWhereClause

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].additionalWhereClause

**Since** 2.0

A WHERE clause that is used when initializing the Index Queue, limiting what goes into the Queue. Use this to limit records by page ID or the like.

```

// only index standard and mount pages, enabled for search
plugin.tx_solr.index.queue.pages.additionalWhereClause = doktype IN(1, 7)

```

#### 8.5.6 queue.[indexConfig].initialPagesAdditionalWhereClause

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].initialPagesAdditionalWhereClause

**Since** 6.1

A WHERE clause that is used when initializing the Index Queue, limiting pages that goes into the Queue. This filter is applied **prior** to the `plugin.tx_solr.index.queue.[indexConfig].additionalWhereClause` filter and hence provides an even stronger filter mechanism - since it can be used to filter away page ID's that shouldn't be processed at all.

```

// Filter away pages that are "spacer" and have no_search, hidden and nav_hide set_
↳to zero
plugin.tx_solr.index.queue.pages.initialPagesAdditionalWhereClause = doktype <>_
↳199 AND no_search = 0 AND hidden = 0 AND nav_hide = 0

```

### 8.5.7 queue.[indexConfig].additionalPageIds

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].additionalPageIds

**Since** 2.0

Defines additional pages to take into account when indexing records for example. Especially useful for indexing DAM records or if you have your news outside your site root in a shared folder to use for multiple sites.

Additional page IDs can be provided as comma-separated list.

### 8.5.8 queue.[indexConfig].table

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].table

**Since** 2.0

Sometimes you may want to index records from a table with different configurations, f.e., to generate different single view URLs for tt\_news records depending on their category or storage page ID. In these cases you can use a distinct name for the configuration and define the table explicitly.

```
plugin.tx_solr.index.queue.generalNews {
    table = tt_news
    fields.url = URL for the general news
    // more field configurations here ...
}

// extends the general news configuration
plugin.tx_solr.index.queue.pressNews < plugin.tx_solr.index.queue.generalNews
plugin.tx_solr.index.queue.pressNews {
    fields.url = overwriting URL for the press announcements
    // may overwrite or unset more settings from the general configuration
}

// completely different configuration
plugin.tx_solr.index.queue.productNews {
    table = tt_news
    fields.url = URL for the product news
}
```

### 8.5.9 queue.[indexConfig].initialization

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].initialization

**Since** 2.0

When initializing the Index Queue through the search backend module the queue tries to determine what records need to be indexed. Usually the default initializer will be enough for this purpose, but this option allows to define a class that will be used to initialize and add records to the Index Queue in special ways.

The extension uses this option for initializing the pages and more specifically to resolve Mount Page trees so they can be indexed too, although only being virtual pages.

### 8.5.10 queue.[indexConfig].indexer

**Type** String, Array

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].indexer

**Since** 2.0

When configuring tables to index a default indexer is used that comes with the extensions. The default indexer resolves the Solr field to database table field mapping as configured. However, in some cases you may reach the limits of TypoScript, when this happens you can configure a specialized indexer using this setting.

The indexer class is loaded using TYPO3's auto loading mechanism, so make sure your class is registered properly. The indexer must extend `tx_solr_indexqueue_Indexer`.

Example, pages use a specialized indexer:

```
plugin.tx_solr.index.queue.pages {
    indexer = tx_solr_indexqueue_PageIndexer
    indexer {
        // add options for the indexer here
    }
}
```

Within the indexer configuration you can also define options for the specialized indexer. These are then available within the indexer class in `$this->options`.

Example, the TypoScript settings are available in PHP:

TypoScript:

```
plugin.tx_solr.index.queue.myIndexingConfiguration {
    indexer = tx_myextension_indexqueue_MyIndexer
    indexer {
        someOption = x
        someOtherOption = y
    }
}
```

PHP:

```
namespace MyVendor\Namespace;

use ApacheSolrForTypo3\Solr\IndexQueue\Indexer;

class MyIndexer extends Indexer {
    public function index(tx_solr_indexqueue_Item $item) {
        if ($this->options['someOption']) {
            // ...
        }
    }
}
```

### 8.5.11 queue.[indexConfig].indexingPriority

**Type** Integer

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].indexingPriority

**Since** 2.2

**Default** 0

Allows to define the order in which Index Queue items of different kinds are indexed. Items with higher priority are indexed first.

### 8.5.12 queue.[indexConfig].fields

**Type** Array

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields

**Since** 2.0

Mapping of Solr field names on the left side to database table field names or content objects on the right side. You must at least provide the title, content, and url fields. TYPO3 system fields like uid, pid, crdate, tstamp and so on are added automatically by the indexer depending on the TCA information of a table.

You can also use a virtual field called `__solr_content`, which holds the content of the current page.

Example:

```
plugin.tx_solr.index.queue.[indexConfig].fields {
    content = bodytext
    title = title
    url = TEXT
    url {
        typolink.parameter = {$plugin.tx_extensionkey.singlePid}
        typolink.additionalParams = &tx_extenionkey[record]={field:uid}
        typolink.additionalParams.insertData = 1
        typolink.returnLast = url
    }
}
```

### 8.5.13 queue.[indexConfig].attachments.fields

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].attachments.fields

**Since** 2.5-dkd

Comma-separated list of fields that hold files. Using this setting allows to tell the file indexer in which fields to look for files to index from records.

Example:

```
plugin.tx_solr.index.queue.tt_news.attachments.fields = news_files
```

### 8.5.14 queue.[indexConfig].recursiveUpdateFields

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].recursiveUpdateFields

**Since** 6.1

**Default** Empty

Allows to define a list of additional fields from the pages table that will trigger a recursive update.

```
plugin.tx_solr.index.queue.pages.recursiveUpdateFields = title
```

The example above will trigger a recursive update of pages if the title is changed.

Please note that the following columns should NOT be configured as recursive update fields: “hidden” and “extendToSubpages”. These fields are handled by EXT:solr already internally and thus they will have not effect.

### 8.5.15 queue.pages.excludeContentByClass

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.excludeContentByClass

**Since** 4.0

Can be used for page indexing to exclude a certain css class to be indexed.

Example:

```
plugin.tx_solr.index.queue.pages.excludeContentByClass = removeme
```

The example above will remove the content of items in the page that have the css class “removeme”.

#### 8.5.16 queue.pages.allowedPageTypes

**Type** List of Integers

**TS Path** plugin.tx\_solr.index.queue.pages.allowedPageTypes

**Since** 3.0

**Default** 1,4,7

Allows to set the pages types allowed to be indexed.

Even if you have multiple queues for pages, e.g. via different `additionalWhereClause`'s, you have to set this value to allow further `doktype`'s. Restrict the pages to be indexed by each queue via `additionalWhereClause`.

#### 8.5.17 queue.pages.indexer.authorization.username

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.indexer.authorization.username

**Since** 2.0

Specifies the username to use when indexing pages protected by htaccess.

#### 8.5.18 queue.pages.indexer.authorization.password

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.indexer.authorization.password

**Since** 2.0

Specifies the password to use when indexing pages protected by htaccess.

#### 8.5.19 queue.pages.indexer.frontendDataHelper.scheme

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.indexer.frontendDataHelper.scheme

**Since** 2.0

Specifies the scheme to use when indexing pages.

#### 8.5.20 queue.pages.indexer.frontendDataHelper.host

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.indexer.frontendDataHelper.host

**Since** 2.0

Specifies the host to use when indexing pages.

#### 8.5.21 queue.pages.indexer.frontendDataHelper.path

**Type** String

**TS Path** plugin.tx\_solr.index.queue.pages.indexer.frontendDataHelper.path

**Since** 2.0

Specifies the path to use when indexing pages.

### 8.5.22 Indexing Helpers

To make life even easier the Index Queue provides some indexing helpers. These helpers are content objects that perform cleanup tasks or content transformations.

#### SOLR\_CONTENT

**Since** 2.0

Cleans a database field in a way so that it can be used to fill a Solr document's content field. It removes HTML markup, Javascript and invalid utf-8 characters.

The helper supports stdWrap on its configuration root.

Example:

```
content = SOLR_CONTENT
content {
    field = bodytext
}
```

#### Parameters:

##### value

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].value

**Since** 2.0

Defines the content to clean up. In this case the value would be hard-coded.

#### SOLR\_MULTIVALUE

**Since** 2.0

Turns comma separated strings into an array to be used in a multi value field of an Solr document.

The helper supports stdWrap on its configuration root.

Example:

```
keywords = SOLR_MULTIVALUE
keywords {
    field = tags
    separator = ,
    removeEmptyValues = 1
}
```

#### Parameters:

##### value

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].value

**Since** 2.0

Defines the content to clean up. In this case the value would be hard-coded.

##### separator

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].separator

**Since** 2.0

**Default** ,

The separator by which to split the content.

### **removeEmptyValues**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].removeEmptyValues

**Since** 2.0

**Options** 0,1

**Default** 1

The helper will clean the resulting array from empty values by default. If, for some reason, you want to keep empty values just set this to 0.

### **removeDuplicateValues**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].removeDuplicateValues

**Since** 2.9

**Options** 0,1

**Default** 0

Cleans the result from duplicate values.

### **SOLR\_RELATION**

**Since** 2.0

Resolves relations between tables.

Example:

```
category_stringM = SOLR_RELATION
category_stringM {
    localField = category
    multiValue = 1
}
```

### **Parameters:**

#### **localField**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].localField

**Since** 2.0

**Required** yes

The current record's field name to use to resolve the relation to the foreign table.

#### **foreignLabelField**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].foreignLabelField

**Since** 2.0

Usually the label field to retrieve from the related records is determined automatically using TCA, using this option the desired field can be specified explicitly. To specify the label field for recursive relations, the field names can be separated by a dot, e.g. for a category hierarchy to get the name of the parent category one could use "parent.name" (since version:2.9).

#### **multiValue**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].multiValue

**Since** 2.0

**Options** 0,1

**Default** 0

Whether to return related records suitable for a multi value field. If this is disabled the related values will be concatenated using the following singleValueGlue.

#### **singleValueGlue**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].singleValueGlue

**Since** 2.0

**Default** ", "

When not using multiValue, the related records need to be concatenated using a glue string, by default this is ", " (comma followed by space). Using this option a custom glue can be specified. The custom value must be wrapped by pipe (|) characters to be able to have leading or trailing spaces.

#### **relationTableSortingField**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].relationTableSortingField

**Since** 2.2

Field in an mm relation table to sort by, usually "sorting".

#### **enableRecursiveValueResolution**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].enableRecursiveValueResolution

**Since** 2.9

**Options** 0,1

**Default** 1

If the specified remote table's label field is a relation to another table, the value will be resolve by following the relation recursively.

#### **removeEmptyValues**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].removeEmptyValues

**Since** 2.9

**Options** 0,1

**Default** 1

Removes empty values when resolving relations.

#### **removeDuplicateValues**

**Type** Boolean

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].removeDuplicateValues

**Since** 2.9

**Options** 0,1

**Default 0**

Removes duplicate values

**additionalWhereClause**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].additionalWhereClause

**Since** 5.0

Where clause that could be used to limit the related items to a subset that matches this where clause

Example:

```
category_stringM = SOLR_RELATION
category_stringM {
    localField = tags
    multiValue = 1
    additionalWhereClause = pid=2
}
```

**SOLR\_CLASSIFICATION**

**Since** 8.0

Allows to classify documents based on a configured pattern

Example:

```
topic_stringM = SOLR_CLASSIFICATION
topic_stringM {
    field = __solr_content
    classes {
        programming {
            matchPatterns = php, java, javascript, go
            class = programming
        }
        cms {
            matchPatterns = TYPO3, joomla
            class = cms
        }
        database {
            matchPatterns = mysql, MariaDB, postgresSQL
            class = database
        }
    }
}
```

The `matchPatterns` can be used to configure pattern that can occur in the content to add that class. In addition `unmatchPatterns` can be configured to define patterns that should not occur in the content.

Patterns are regular expressions. You configure everything that is possible with regular expressions.

Example:s

The pattern `^\s[a-z]*\s`` will match everything, that starts with a **space** followed by **smart** ending with any lowercase letter and ending by **space**. This would match e.g. `smartphone`, `smarhome` and every other word that starts with `smart``.

**Note:**

- The configuration `patterns` is deprecated with 10.0.0 and will be removed in EXT:solr 11. Please use `matchPatterns` and `unmatchPatterns` now.

**field**

**Type** String

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].field

**Since** 8.0

Name of the database field, that should be used to as content to classify. The special field `__solr_content` can be used during indexing to classify the content of the page or file or any other record that fills the content field before.

#### classes

**Type** Array

**TS Path** plugin.tx\_solr.index.queue.[indexConfig].fields.[fieldName].field

**Since** 8.0

Array of classification configurations. Each configuration needs to have the property “patterns”, that is a list of patters that need to match and “class”, that is the mapped class that will be indexed then.

#### Note:

The output field needs to be a multivalue field since an indexed item can have multiple classes.

### 8.5.23 enableCommits

**Type** Boolean

**TS Path** plugin.tx\_solr.index.enableCommits

**Since** 6.1

**Default** true

This setting controls whether ext-solr will implicitly cause solr commits as part of its operation.

If this settings is set to false, you need to ensure that something else will periodically call commits. The solr daemons AutoCommit feature would be a natural choice.

This feature is mainly useful, when you have many installations in the same solr core.

**Note:** Calling some APIs may still cause commits, but these can always be explicitly disabled.

## 8.6 tx\_solr.search

The search section, you probably already guessed it, provides configuration options for the all things related to actually searching the index, setting query parameters, formatting and processing result documents and the result listing.

### 8.6.1 targetPage

**Type** Integer

**TS Path** plugin.tx\_solr.search.targetPage

**Default** 0

**Since** 1.0

Sets the target page ID for links. If it is empty or 0, the current page ID will be used.

Note: This setting can be overwritten by the plugins flexform.

### 8.6.2 trustedFields

**Type** String

**TS Path** plugin.tx\_solr.search.trustedFields

**Default** url

**Since** 3.1

The data in EXT:solr is escaped right after the retrieval from Solr. In rare cases when you need to store HTML in Solr documents you can use this configuration to mark these fields as trusted fields and skip the escaping. Typically this is needed when you want to retrieve html from solr.

The following example shows how to avoid html in the content field:

```
plugin.tx_solr.search.trustedFields = url, content
```

## 8.6.3 initializeWithEmptyQuery

**Type** Boolean**TS Path** plugin.tx\_solr.search.initializeWithEmptyQuery**Default** 0**Options** 0,1**Since** 1.0

If enabled, the results plugin (pi\_results) issues a “get everything” query during initialization. This is useful, if you want to create a page that shows all available facets although no search has been issued by the user yet. Note: Enabling this option alone will not show results of the get everything query. To also show the results of the query, see option showResultsOfInitialEmptyQuery below.

## 8.6.4 showResultsOfInitialEmptyQuery

**Type** Boolean**TS Path** plugin.tx\_solr.search.showResultsOfInitialEmptyQuery**Default** 0**Options** 0,1**Since** 1.0

Requires initializeWithEmptyQuery (above) to be enabled to have any effect. If enabled together with initializeWithEmptyQuery the results of the initial “get everything” query are shown. This way, in combination with a filter you can easily list a predefined set of results.

## 8.6.5 keepExistingParametersForNewSearches

**Type** Boolean**TS Path** plugin.tx\_solr.search.keepExistingParametersForNewSearches**Default** 0**Options** 0,1**Since** 2.0

When doing a new search, existing parameters like filters will be carried over to the new search. This is useful for a scenario where you want to list all available documents first, then allow the user to filter the documents using facets and finally allow him to specify a search term to refine the search.

## 8.6.6 ignoreGlobalQParameter

**Type** Boolean**TS Path** plugin.tx\_solr.search.ignoreGlobalQParameter**Default** 0**Options** 0,1

**Since 7.0**

In some cases you want EXT:solr to react on the parameter “q” in the url. Normally plugins are bounded to a namespace to allow multiple instances of the search on the same page. In this case you might want to disable this and let EXT:solr only react on the namespaced query parameter (tx\_solr[q] by default).

## 8.6.7 additionalPersistentArgumentNames

**Type** String**TS Path** plugin.tx\_solr.search.additionalPersistentArgumentNames**Since 8.0**

Comma-separated list of additional argument names, that should be added to the persistent arguments that are kept for sub request, like the facet and sorting urls. Hard coded argument names are q, filter and sort.

Till solr version 6.5.x all parameters of the plugin namespace was added to the url again. With this setting you could enable this behavior again, but only with a whitelist of argument names.

## 8.6.8 query

The query sub-section defines a few query parameters for the query that will be sent to the Solr server later on. Some query parameters are also generated and set by the extension itself, f.e. when using facets.

query.allowEmptyQuery

**Type** Boolean**TS Path** plugin.tx\_solr.search.query.allowEmptyQuery**Default** 0**Options** 0,1**Since** 1.4

If enabled, empty queries are allowed.

query.allowedSites

**Type** String**TS Path** plugin.tx\_solr.search.query.allowedSites**Since** 2.2**Default** \_\_solr\_current\_site

When indexing documents (pages, records, files, ...) into the Solr index, the solr extension adds a “siteHash”. The siteHash is used to allow indexing multiple sites into one index and still have each site only find its own documents. This is achieved by adding a filter on the siteHash.

Sometimes though, you want to search across multiple domains, then the siteHash is a blocker. Using the allowedSites setting you can set a comma-separated list of domains who’s documents are allowed to be included in the current domain’s search results. The default value is **\_\_solr\_current\_site** which is a magic string/variable that is replaced with the current site’s domain when querying the Solr server.

**Since 3.0**

Version 3.0 introduced a couple more magic keywords that get replaced:

- **\_\_current\_site** same as **\_\_solr\_current\_site**
- **\_\_all** Adds all domains as allowed sites
- **\*** (asterisk character) Everything is allowed as siteHash (same as no siteHash check). This option should only be used when you need a search across multiple system and you know the impact of turning of the siteHash check.

query.getParameter

**Type** String

**TS Path** plugin.tx\_solr.search.query.getParameter

**Since** 2.2

**Default** tx\_solrlq

The GET query parameter name used in URLs. Useful for cases f.e. when a website tracking tool does not support the default array GET parameters.

The option expects a string, you can also define an array in the form of arrayName|arrayKey.

Example:

```
plugin.tx_solr.search.query.getParameter = q
```

query.queryFields (query.fields)

**Type** String

**TS Path** plugin.tx\_solr.search.query.queryFields

**Since** 1.0

**Default** content^40.0, title^5.0, keywords^2.0, tagsH1^5.0, tagsH2H3^3.0, tagsH4H5H6^2.0, tagsIn-line^1.0, description^4.0, abstract^1.0, subtitle^1.0, navtitle^1.0, author^1.0

**Note** query.fields has been renamed to query.queryFields in version 3.0

Defines what fields to search in the index. Fields are defined as a comma separated list. Each field can be given a boost by appending the boost value separated by the ^ character, that's Lucene query language. The boost value itself is a float value, pay attention to using a dot as the separator for the fractions. Use this option to add more fields to search.

The boost take influence on what score a document gets when searching and thus how documents are ranked and listed in the search results. A higher score will move documents up in the result listing. The boost is a multiplier for the original score value of a document for a search term.

By default if a search term is found in the content field the documents gets scored / ranked higher as if a term was found in the title or keywords field. Although the default should provide a good setting, you can play around with the boost values to find the best ranking for your content.

query.returnFields

**Type** String

**TS Path** plugin.tx\_solr.search.query.returnFields

**Since** 3.0

**Default** \*, score

Limits the fields returned in the result documents, by default returns all field plus the virtual score field.

query.minimumMatch

**Type** String

**TS Path** plugin.tx\_solr.search.query.minimumMatch

**Since** 1.2, 2.0

**Default** (empty)

**See** [Apache Solr Wiki mm / Minimum Should Match](#)

Sets the minimum match mm query parameter. By default the mm query parameter is set in solrconfig.xml as 2<-35%. This means that for queries with less than three words they all must match the searched fields of a document. For queries with three or more words at least 65% of them must match rounded up.

Please consult the link to the Solr wiki for a more detailed description of the mm syntax.

query.boostFunction

**Type** String

**TS Path** plugin.tx\_solr.search.query.boostFunction

**Since** 1.2, 2.0

**Default** (empty)

**See** [Apache Solr Wiki / TheDisMaxQueryParser BoostFunction](#)

**See** [Apache Solr Wiki / Function Queries](#)

**Example** recip(ms(NOW,created),3.16e-11,1,1)

A boost function can be useful to influence the relevance calculation and boost some documents to appear more at the beginning of the result list. Technically the parameter will be mapped to the “bf” parameter in the solr query.

Use cases for example could be:

**“Give newer documents a higher priority”:**

This could be done with a recip function:

```
recip(ms(NOW,created),3.16e-11,1,1)
```

**“Give documents with a certain field value a higher priority”:**

This could be done with:

```
termfreq(type,'tx_solr_file')
```

query.boostQuery

**Type** Array

**TS Path** plugin.tx\_solr.search.query.boostQuery

**Since** 2.0

**Default** (empty)

**See** [Apache Solr Wiki / TheDisMaxQueryParser BoostQuery](#)

Sets the boost function **bq** query parameter.

Allows to further manipulate the score of a document by using Lucene syntax queries. A common use case for boost queries is to rank documents of a specific type higher than others.

Please consult the link to the Solr wiki for a more detailed description of boost functions.

Example (boosts tt\_news documents by factor 10):

```
plugin.tx_solr.search.query.boostQuery.boostNews = (type:tt_news)^10
```

query.tieParameter

**Type** String

**TS Path** plugin.tx\_solr.search.query.tieParameter

**Since** 8.0

**See** [Lucene Documentation / TheDisMaxQueryParser TieParameter <http://lucene.apache.org/solr/guide/7\\_0/the-dismax-query-parser.html#the-tie-tie-breaker-parameter>](http://lucene.apache.org/solr/guide/7_0/the-dismax-query-parser.html#the-tie-tie-breaker-parameter)

This parameter ties the scores together. Setting is to “0” (default) uses the maximum score of all computed scores. A value of “1.0” adds all scores. The value is a number between “0.0” and “1.0”.

query.filter

**Type** Array

**TS Path** plugin.tx\_solr.search.query.filter

**Since** 1.0

**See** [Lucene Documentation / Query Parser Syntax](#)

Allows to predefine filters to apply to a search query. You can add multiple filters through a name to Lucene filter mapping. The filters support stdWrap.

Example:

```
plugin.tx_solr.search.query.filter {
    pagesOnly = type:pages
    johnsPages = author:John
    badKeywords = {foo}
    badKeywords.wrap = -keywords:|
    badKeywords.data = GP:q
}
```

**Note:** When you want to filter for something with whitespaces you might need to quote the filter term.

```
plugin.tx_solr.search.query.filter {
    johnsDoesPages = author:"John Doe"
}
```

query.filter.\_\_pageSections

**Type** comma-separated list of page IDs

**TS Path** plugin.tx\_solr.search.query.filter.\_\_pageSections

**Since** 3.0

This is a magic/reserved filter (thus the double underscore). It limits the query and the results to certain branches/-sections of the page tree. Multiple starting points can be provided as a comma-separated list of page IDs.

query.sortBy

**Type** String

**TS Path** plugin.tx\_solr.search.query.sortBy

**Since** 1.0

Allows to set a custom sorting for the query. By default Solr will sort by relevance, using this setting you can sort by any sortable field.

Needs a Solr field name followed by asc for ascending order or desc for descending.

Example:

```
plugin.tx_solr.search.query.sortBy = title asc
```

query.phrase

**Type** Boolean

**TS Path** plugin.tx\_solr.search.query.phrase

**Since** 8.0

**Default** 0

**See** “pf”, “ps”, “qs” [https://lucene.apache.org/solr/guide/6\\_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Thepf\\_PhraseFields\\_Parameter](https://lucene.apache.org/solr/guide/6_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Thepf_PhraseFields_Parameter)

This parameter enables the phrase search feature from Apache Solr. Setting is to “0” (default) does not change behaviour from Apache Solr if user searches for two and more words. Enabling phrase search feature influences the document set and/or the scores of documents.

query.phrase.fields

**Type** String

**TS Path** plugin.tx\_solr.search.query.phrase.fields

**Since** 8.0

**Default** content^10.0, title^10.0, tagsH1^10.0, tagsH2H3^10.0, tagsH4H5H6^10.0, tagsInline^10.0, description^10.0, abstract^10.0, subtitle^10.0, navtitle^10.0

**See** “pf” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Thepf\\_PhraseFields\\_Parameter](https://lucene.apache.org/solr/guide/6_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Thepf_PhraseFields_Parameter)

This parameter defines what fields should be used to search in the given phrase. Matched documents will be boosted according to fields boost value. Fields are defined as a comma separated list and same way as queryFields.

Note: The value of this setting has NO influence on explicit phrase search.

query.phrase.slop

**Type** Integer

**TS Path** plugin.tx\_solr.search.query.phrase.slop

**Since** 8.0

**Default** 0

**See** “ps” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Theps\\_PhraseSlop\\_Parameter](https://lucene.apache.org/solr/guide/6_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Theps_PhraseSlop_Parameter)

This parameter defines the “phrase slop” value, which represents the number of positions one word needs to be moved in relation to another word in order to match a phrase specified in a query.

Note: The value of this setting has NO influence on explicit phrase search.

query.phrase.querySlop

**Type** Integer

**TS Path** plugin.tx\_solr.search.query.phrase.querySlop

**Since** 8.0

**Default** 0

**See** “qs” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Theqs\\_QueryPhraseSlop\\_Parameter](https://lucene.apache.org/solr/guide/6_6/the-dismax-query-parser.html#TheDisMaxQueryParser-Theqs_QueryPhraseSlop_Parameter)

This parameter defines the “phrase slop” value, which represents the number of positions one word needs to be moved in relation to another word in order to match a phrase specified in a explicit phrase search query. Note: On explicit(“double quoted” phrase) phrase search Apache Solr searches in “qf” queryFields

**Note: The value of this setting has no influence on implicit phrase search.** On explicit phrase search the Solr searches in `qf` (`plugin.tx_solr.search.query.queryFields`) defined fields.

`query.bigramPhrase`

**Type** Boolean

**TS Path** `plugin.tx_solr.search.query.bigramPhrase`

**Since** 8.0

**Default** 0

**See** “`pf2`”, “`ps2`” [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf2Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf2Parameter)

This parameter enables the bigram phrase search feature from Apache Solr. Setting is to “0” (default) does not change behaviour from Apache Solr if user searches for three and more words. Enabling bigram phrase search feature influences the scores of documents with phrase occurrences.

`query.bigramPhrase.fields`

**Type** String

**TS Path** `plugin.tx_solr.search.query.bigramPhrase.fields`

**Since** 8.0

**Default** `content^10.0, title^10.0, tagsH1^10.0, tagsH2H3^10.0, tagsH4H5H6^10.0, tagsInline^10.0, description^10.0, abstract^10.0, subtitle^10.0, navtitle^10.0`

**See** “`pf2`” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf2Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf2Parameter)

This parameter defines what fields should be used to search in the given sentence(three+ words). Matched documents will be boosted according to fields boost value. Fields are defined as a comma separated list and same way as `queryFields`.

Note: The value of this setting has NO influence on explicit phrase search.

`query.bigramPhrase.slop`

**Type** Integer

**TS Path** `plugin.tx_solr.search.query.bigramPhrase.slop`

**Since** 8.0

**Default** 0

**See** “`ps2`” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Theps2Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Theps2Parameter)

This parameter defines the “bigram phrase slop” value, which represents the number of positions one word needs to be moved in relation to another word in order to match a phrase specified in a query.

Note: The value of this setting has NO influence on explicit phrase search.

`query.trigramPhrase`

**Type** Boolean

**TS Path** `plugin.tx_solr.search.query.trigramPhrase`

**Since** 8.0

**Default** 0

**See** “`pf3`”, “`ps3`” [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf3Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf3Parameter)

This parameter enables the phrase search feature from Apache Solr. Setting is to “0” (default) does not change behaviour from Apache Solr if user searches for two and more words. Enabling phrase search feature influences the scores of documents with phrase occurrences.

query.trigramPhrase.fields

**Type** String

**TS Path** plugin.tx\_solr.search.query.trigramPhrase.fields

**Since** 8.0

**Default** content^10.0, title^10.0, tagsH1^10.0, tagsH2H3^10.0, tagsH4H5H6^10.0, tagsInline^10.0, description^10.0, abstract^10.0, subtitle^10.0, navtitle^10.0

**See** “pf3” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf3Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Thepf3Parameter)

This parameter defines what fields should be used to search in the given phrase. Matched documents will be boosted according to fields boost value. Fields are defined as a comma separated list and same way as queryFields.

Note: The value of this setting has NO influence on explicit phrase search.

query.trigramPhrase.slop

**Type** Integer

**TS Path** plugin.tx\_solr.search.query.trigramPhrase.slop

**Since** 8.0

**Default** 0

**See** “ps3” parameter [https://lucene.apache.org/solr/guide/6\\_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Theps3Parameter](https://lucene.apache.org/solr/guide/6_6/the-extended-dismax-query-parser.html#TheExtendedDisMaxQueryParser-Theps3Parameter)

This parameter defines the “trigram phrase slop” value, which represents the number of positions one word needs to be moved in relation to another word in order to match a phrase specified in a query.

Note: The value of this setting has NO influence on explicit phrase search.

### 8.6.9 results

results.resultsHighlighting

**Type** Boolean

**TS Path** plugin.tx\_solr.search.results.resultsHighlighting

**Since** 1.0

**Default** 0

**See** [Apache Solr Wiki / FastVectorHighlighter](#)

En-/disables search term highlighting on the results page.

Note: The FastVectorHighlighter is used by default (Since 4.0) if fragmentSize is set to at least 18 (this is required by the FastVectorHighlighter to work).

results.resultsHighlighting.highlightFields

**Type** String

**TS Path** plugin.tx\_solr.search.results.resultsHighlighting.highlightFields

**Since** 1.0

**Default** content

A comma-separated list of fields to highlight.

Note: The highlighting in solr (based on FastVectorHighlighter requires a field datatype with **termVectors=on**, **termPositions=on** and **termOffsets=on** which is the case for the content field). If you add other fields here, make sure that you are using a datatype where this is configured.

results.resultsHighlighting.fragmentSize

**Type** Integer

**TS Path** plugin.tx\_solr.search.results.resultsHighlighting.fragmentSize

**Since** 1.0

**Default** 200

The size, in characters, of fragments to consider for highlighting. “0” indicates that the whole field value should be used (no fragmenting).

results.resultsHighlighting.fragmentSeparator

**Type** String

**TS Path** plugin.tx\_solr.search.results.resultsHighlighting.fragmentSeparator

**Since** 3.0

**Default** [...]

When highlighting is activated Solr highlights the fields configured in highlightFields and can return multiple fragments of fragmentSize around the highlighted search word. These fragments are used as teasers in the results list. fragmentSeparator allows to configure the glue string between those fragments.

results.resultsHighlighting.wrap

**Type** String

**TS Path** plugin.tx\_solr.search.results.resultsHighlighting.wrap

**Since** 1.0

**Default** <span class="results-highlight">|</span>

The wrap for search terms to highlight.

results.siteHighlighting

**Type** Boolean

**TS Path** plugin.tx\_solr.search.results.siteHighlighting

**Since** 2.0

**Default** 0

Activates TYPO3’s highlighting of search words on the actual pages. The words a user searched for will be wrapped with a span and CSS class csc-sword Highlighting can be styled using the CSS class csc-sword, you need to add the style definition yourself for the complete site.

results.resultsPerPage

**Type** Integer

**TS Path** plugin.tx\_solr.search.results.resultsPerPage

**Since** 1.0

**Default** {\$plugin.tx\_solr.search.results.resultsPerPage}

Sets the number of shown results per page.

results.resultsPerPageSwitchOptions

**Type** String

**TS Path** plugin.tx\_solr.search.results.resultsPerPageSwitchOptions

**Since** 1.0

**Default** 10, 25, 50

Defines the shown options of possible results per page.

results.showDocumentScoreAnalysis

**Type** Boolean

**TS Path** plugin.tx\_solr.search.results.showDocumentScoreAnalysis

**Since** 2.5-dkd

**Default** 0

**Options** 0,1

If enabled, the analysis and display of the score analysis for logged in backend users will be initialized.

### 8.6.10 spellchecking

spellchecking

**Type** Boolean

**TS Path** plugin.tx\_solr.search.spellchecking

**Since** 1.0

**Default** 0

Set `plugin.tx_solr.search.spellchecking = 1` to enable spellchecking / did you mean.

spellchecking.searchUsingSpellCheckerSuggestion

**Type** Boolean

**TS Path** plugin.tx\_solr.search.spellchecking.searchUsingSpellCheckerSuggestion

**Since** 4.0

**Default** 0

This setting can be used to trigger a new search automatically when the previous search had no results but suggestions from the spellchecking. In this case the user can directly see the results of the best correction option.

### 8.6.11 lastSearches

lastSearches

**Type** Boolean

**TS Path** plugin.tx\_solr.search.lastSearches

**Since** 1.3-dkd

**Default** 0

Set `plugin.tx_solr.search.lastSearches = 1` to display a list of the last searches.

lastSearches.limit

**Type** Integer

**TS Path** plugin.tx\_solr.search.lastSearches.limit

**Since** 1.3-dkd

**Default** 10

Defines the number of last searches, that should get minded.

lastSearches.mode

**Type** String

**TS Path** plugin.tx\_solr.search.lastSearches.mode

**Since** 1.3-dkd

**Default** user

**Options** user, global

If mode is user, keywords will get stored into the session. If mode is global keywords will get stored into the database.

### 8.6.12 frequentSearches

frequentSearches

**Type** Boolean

**TS Path** plugin.tx\_solr.search.frequentSearches

**Since** 1.3-dkd, 2.8

**Default** 0

Set `plugin.tx_solr.search.frequentSearches = 1` to display a list of the frequent / common searches.

frequentSearches.useLowercaseKeywords

**Type** Boolean

**TS Path** plugin.tx\_solr.search.frequentSearches.useLowercaseKeywords

**Since** 2.9

**Default** 0

When enabled, keywords are written to the statistics table in lower case.

frequentSearches.minSize

**Type** Integer

**TS Path** plugin.tx\_solr.search.frequentSearches.minSize

**Since** 1.3-dkd, 2.8

**Default** 14

The difference between `frequentSearches.maxSize` and `frequentSearches.minSize` is used for calculating the current step.

frequentSearches.maxSize

**Type** Integer

**TS Path** plugin.tx\_solr.search.frequentSearches.maxSize

**Since** 1.3-dkd, 2.8

**Default** 32

The difference between frequentSearches.maxSize and frequentSearches.minSize is used for calculating the current step.

frequentSearches.limit

**Type** Integer

**TS Path** plugin.tx\_solr.search.frequentSearches.limit

**Since** 1.3-dkd, 2.8

**Default** 20

Defines the maximum size of the list by frequentSearches.select.

frequentSearches.select

**Type** cObject

**TS Path** plugin.tx\_solr.search.frequentSearches.select

**Since** 1.3-dkd, 2.8

Defines a database connection for retrieving statistics.

### 8.6.13 sorting

sorting

**Type** Boolean

**TS Path** plugin.tx\_solr.search.sorting

**Since** 1.0

**Default** 0

Set `plugin.tx_solr.search.sorting = 1` to allow sorting of results.

sorting.defaultOrder

**Type** String

**TS Path** plugin.tx\_solr.search.sorting.defaultOrder

**Since** 1.0

**Default** asc

**Options** asc, desc

Sets the default sort order for all sort options.

sorting.options

This is a list of sorting options. Each option has a field and label to be used. By default the options title, type, author, and created are configured, plus the virtual relevancy field which is used for sorting by default.

Example:

```

plugin.tx_solr.search {
  sorting {
    options {
      relevance {
        field = relevance
        label = Relevance
      }

      title {
        field = sortTitle
        label = Title
      }
    }
  }
}

```

Note: As mentioned before **relevance** is a virtual field that is used to **reset** the sorting. Sorting by relevance means to have the order provided by the scoring from solr. That the reason why sorting **descending** on relevance is not possible.

sorting.options.[optionName].label

**Type** String / stdWrap

**TS Path** plugin.tx\_solr.search.sorting.options.[optionName].label

**Since** 1.0

Defines the name of the option's label. Supports stdWrap.

sorting.options.[optionName].field

**Type** String / stdWrap

**TS Path** plugin.tx\_solr.search.sorting.options.[optionName].field

**Since** 1.0

Defines the option's field. Supports stdWrap.

sorting.options.[optionName].defaultOrder

**Type** String

**TS Path** plugin.tx\_solr.search.sorting.options.[optionName].defaultOrder

**Since** 2.2

**Default** asc

**Options** asc, desc

Sets the default sort order for a particular sort option.

#### 8.6.14 faceting

faceting

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting

**Since** 1.0

**Default** 0

Set `plugin.tx_solr.search.faceting = 1` to enable faceting.

faceting.minimumCount

**Type** Integer

**TS Path** plugin.tx\_solr.search.faceting.minimumCount

**Since** 1.0

**Default** 1

**See** [Apache Solr Wiki / Faceting mincount Parameter](#)

This indicates the minimum counts for facet fields should be included in the response.

faceting.sortBy

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.sortBy

**Since** 1.0

**Default** count

**Options** count, index, 1, 0, true, false, alpha (1.2, 2.0), lex (1.2, 2.0)

**See** [Apache Solr Wiki / Faceting sortParameter Parameter](#)

Defines how facet options are sorted, by default they are sorted by count of results, highest on top. count, 1, true are aliases for each other.

Facet options can also be sorted alphabetically (lexicographic by indexed term) by setting the option to index. index, 0, false, alpha (from version 1.2 and 2.0), and lex (from version 1.2 and 2.0) are aliases for index.

faceting.limit

**Type** Integer

**TS Path** plugin.tx\_solr.search.faceting.limit

**Since** 1.0

**Default** 10

Number of options to display per facet. If more options are returned by Solr, they are hidden and can be expanded by clicking a “show more” link. This feature uses a small javascript function to collapse/expand the additional options.

faceting.facetLimit

**Type** Integer

**TS Path** plugin.tx\_solr.search.faceting.facetLimit

**Since** 6.0

**Default** 100

Number of options of a facet returned from solr.

faceting.keepAllFacetsOnSelection

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.keepAllFacetsOnSelection

**Since** 2.2

**Default** 0

**Options** 0, 1

When enabled selecting an option from a facet will not reduce the number of options available in other facets.

faceting.countAllFacetsForSelection

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.countAllFacetsForSelection

**Since** 8.0

**Default** 0

**Options** 0, 1

When `keepAllFacetsOnSelection` is active the count of a facet do not get reduced. You can use `countAllFacetsForSelection` to achieve that.

The following example shows how to keep all options of all facets by keeping the real document count, even when it has zero options:

```
plugin.tx_solr.search.faceting.keepAllFacetsOnSelection = 1 plugin.tx_solr.search.faceting.countAllFacetsForSelection = 1 plugin.tx_solr.search.faceting.minimumCount = 0
```

faceting.showAllLink.wrap

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.showAllLink.wrap

**Since** 1.0

**Default** <li></li>

Defines the output of the “Show more” link, that is rendered if there are more facets given than set by `faceting.limit`.

faceting.showEmptyFacets

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.showEmptyFacets

**Since** 1.3

**Default** 0

**Options** 0, 1

By setting this option to 1, you will allow rendering of empty facets. Usually, if a facet does not offer any options to filter a resultset of documents, the facet header will not be shown. Using this option allows the header still to be rendered when no filter options are provided.

faceting.urlParameterStyle

**Type** Option/String (index or assoc)

**TS Path** plugin.tx\_solr.search.faceting.urlParameterStyle

**Since** 11.1

**Default** index

**Note** On assoc, the setting `faceting.urlParameterSort` will be enabled and can not be disabled.

Allows to change the url style of facets. This can be legacy index or more modern associative style.

Index style: `tx_solr[filter][0]=type:pages` Associative style: `tx_solr[filter][type:pages]=1`

faceting.urlParameterSort

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.urlParameterSort

**Since** 11.1

**Default** 0

**Note** On faceting.urlParameterStyle = assoc, this setting can not be disabled.

Allows to enable sorting of url parameters, so the single state of facets is associated with same url, no matter in which order the facets were selected

faceting.facetLinkUrlParameters

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facetLinkUrlParameters

**Since** 2.8

Allows to add URL GET parameters to the links build in facets.

faceting.facetLinkUrlParameters.useForFacetResetLinkUrl

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facetLinkUrlParameters.useForFacetResetLinkUrl

**Since** 2.8

Allows to prevent adding the URL parameters to the facets reset link by setting the option to 0.

faceting.facets

**Type** Array

**TS Path** plugin.tx\_solr.search.faceting.facets

**Since** 1.0

**Default** type

**See** [Apache Solr Wiki / Faceting Overview](#)

Defines which fields you want to use for faceting. It's a list of facet configurations.

```
plugin.tx_solr.search.faceting.facets {
    type {
        field = type
        label = Content Type
    }

    category {
        field = category_stringM
        label = Category
    }
}
```

faceting.facets.[facetName] - single facet configuration

You can add new facets by simply adding a new facet configuration in TypoScript. [facetName] represents the facet's name and acts as a configuration "container" for a single facet. All configuration options for a facet are defined within that "container".

A facet will use the values of a configured index field to offer these values as filter options to your site's visitors. You need to make sure that the facet field's type allows to sort the field's value; like string, int, and other primitive types.

To configure a facet you only need to provide the label and field configuration options, all other configuration options are optional.

faceting.facets.[facetName].additionalExcludeTags

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].additionalExcludeTags

**Since** 9.0

**Required** no

The settings `keepAllOptionsOnSelection`` and `keepAllFacetsOnSelection`` are used internally to build exclude tags for facets in order to exclude the filters from the facet counts. This helps to keep the counts of a facet as expected by the user, in some usecases (Read also: <http://yonik.com/multi-select-faceting/>).

With the setting `additionalExcludeTags`` you can add tags of facets that should be excluded from the counts as well.

**Note:** This setting is only available for option facets by now.

faceting.facets.[facetName].addFieldAsTag

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].addFieldAsTag

**Since** 9.0

**Required** no

**Default** false

When you want to add fields as `additionalExcludeTags`` for a facet a tag for this facet needs to exist. You can use this setting to force the creation of a tag for this facet in the solr query.

faceting.facets.[facetName].field

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].field

**Since** 1.0

**Required** yes

Which field to use to create the facet.

faceting.facets.[facetName].label

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].label

**Since** 1.0

**Required** yes

Used as a headline or title to describe the options of a facet. Used in flex forms of plugin for filter labels. Can be translated with LLL: and consumed and translated in Partial/Facets/\* with `f:translate ViewHelper`.

faceting.facets.[facetName].excludeValues

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].excludeValues

**Since** 7.0

**Required** no

Defines a comma separated list of options that are excluded (The value needs to match the value in solr)

Important: This setting only makes sense for option based facets (option, query, hierarchy)

faceting.facets.[facetName].facetLimit

**Type** Integer

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].facetLimit

**Since** 8.0

**Default** -1

Hard limit of options returned by solr.

**Note:** This is only available for options facets.

faceting.facets.[facetName].metrics

**Type** Array

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].metrics

**Since** 8.0

**Default** empty

Metrics can be use to collect and enhance facet options with statistical data of the faceted documents. They can be used to render useful information in the context of an facet option.

Example:

```
plugin.tx_solr.search.faceting.facets {
    category {
        field = field
        label = Category
        metrics {
            downloads = sum(downloads_intS)
        }
    }
}
```

The example above will make the metric “downloads” available for all category options. In this case it will be the sum of all downloads of this category item. In the frontend you can render this metric with “<facetoptions>.metrics.downloads” and use it for example to show it instead of the normal option count.

faceting.facets.[facetName].partialName

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].partialName

**Since** 7.0

**Required** no

By convention a facet is rendered by it’s default partial that is located in “Resources/Private/Partials/Facets/<Type>.html”.

If you want to render a single facet with another, none conventional partial, you can configure it with “partialName = MyFacetPartial”.

faceting.facets.[facetName].keepAllOptionsOnSelection

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].keepAllOptionsOnSelection

**Since** 1.2, 2.0

**Default** 0

**Options** 0, 1

Normally, when clicking any option link of a facet this would result in only that one option being displayed afterwards. By setting this option to one, you can prevent this. All options will still be displayed.

This is useful if you want to allow the user to select more than one option from a single facet.

faceting.facets.[facetName].operator

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].operator

**Since** 1.2, 2.0

**Default** AND

**Options** OR, AND

When configuring a facet to allow selection of multiple options, you can use this option to decide whether multiple selected options should be combined using AND or OR.

faceting.facets.[facetName].sortBy

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].sortBy

**Since** 1.2

**Default**

•

**Options** alpha (aliases: index, lex)

Sets how a single facet’s options are sorted, by default they are sorted by number of results, highest on top. Facet options can also be sorted alphabetically by setting the option to alpha.

Note: Since 9.0.0 it is possible to sort a facet by a function. This can be done by defining a metric and use that metric in the sortBy configuration. As sorting name you then need to use by convention “metrics\_<metricName>”

Example:

```
pid {
  label = Content Type
  field = pid
  metrics {
    newest = max(created)
  }
  sortBy = metrics_newest desc
}
```

faceting.facets.[facetName].manualSortOrder

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].manualSortOrder

**Since** 2.2

By default facet options are sorted by the amount of results they will return when applied. This option allows to manually adjust the order of the facet's options. The sorting is defined as a comma-separated list of options to re-order. Options listed will be moved to the top in the order defined, all other options will remain in their original order.

Example - We have a category facet like this:

```
News Category
+ Politics (256)
+ Sports (212)
+ Economy (185)
+ Culture (179)
+ Health (132)
+ Automobile (99)
+ Travel (51)
```

Using `faceting.facets.[facetName].manualSortOrder = Travel`, Health will result in the following order of options:

```
News Category
+ Travel (51)
+ Health (132)
+ Politics (256)
+ Sports (212)
+ Economy (185)
+ Culture (179)
+ Automobile (99)
```

faceting.facets.[facetName].minimumCount

**Type** Integer

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].minumumCount

**Since** 8.0

**Default** 1

Set's the minimumCount for a single facet. This can be usefull e.g. to set the minimumCount of a single facet to 0, to have the options available even when there is result available.

**Note:** This setting is only available for facets that are using the json faceting API of solr. By now this is only available for the options facets.

faceting.facets.[facetName].reverseOrder

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].reverseOrder

**Since** 3.0

**Default** 0

**Options** 0, 1

Reverses the order of facet options.

faceting.facets.[facetName].showEvenWhenEmpty

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].showEvenWhenEmpty

**Since** 2.0

**Default** 0

**Options** 0, 1

Allows you to display a facet even if it does not offer any options (is empty) and although you have set `plugin.tx_solr.search.faceting.showEmptyFacets = 0`.

faceting.facets.[facetName].includeInAvailableFacets

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].includeInAvailableFacets

**Since** 1.3

**Default** 1

**Options** 0, 1

By setting this option to 0, you can prevent rendering of a given facet within the list of available facets.

This is useful if you render the facet somewhere else on the page using the facet view helper and don't want the facet to be rendered twice.

faceting.facets.[facetName].includeInUsedFacets

**Type** Boolean

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].includeInUsedFacets

**Since** 2.0

**Default** 1

**Options** 0, 1

By setting this option to 0, you can prevent rendering of a given facet within the list of used facets.

faceting.facets.[facetName].type

**Type** String

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].type

**Since** 2.0

Defines the type of the facet. By default all facets will render their facet options as a list. PHP Classes can be registered to add new types. Using this setting will allow you to use such a type and then have the facet's options rendered and processed by the registered PHP class.

faceting.facets.[facetName].[type]

**Type** Array

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].[type]

**Since** 2.0

When setting a special type for a facet you can set further options for this type using this array.

Example (numericRange facet displayed as a slider):

```

plugin.tx_solr.search.faceting.facets.size {
    field = size_intS
    label = Size

    type = numericRange
    numericRange {
        start = 0
        end = 100
        gap = 1
    }
}

```

faceting.facets.[facetName].requirements.[requirementName]

**Type** Array

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].requirements.[requirementName]

**Since** 2.2

Allows to define requirements for a facet to be rendered. These requirements are dependencies on values of other facets being selected by the user. You can define multiple requirements for each facet. If multiple requirements are defined, all must be met before the facet is rendered.

Each requirement has a name so you can easily recognize what the requirement is about. The requirement is then defined by the name of another facet and a list of comma-separated values. At least one of the defined values must be selected by the user to meet the requirement.

There are two magic values for the requirement's values definition:

- `__any`: will mark the requirement as met if the user selects any of the required facet's options
- `__none`: marks the requirement as met if none of the required facet's options is selected. As soon as any of the required facet's options is selected the requirement will not be met and thus the facet will not be rendered

Example of a category facet showing only when the user selects the news type facet option:

```

plugin.tx_solr {
    search {
        faceting {
            facets {
                type {
                    label = Content Type
                    field = type
                }

                category {
                    label = Category
                    field = category_stringS
                    requirements {
                        typeIsNews {
                            # typeIsNews is the name of the requirement, c
                            # choose any so you can easily recognize what it does
                            facet = type
                            # The name of the facet as defined above
                            values = news
                            # The value of the type facet option as
                            # it is stored in the Solr index
                        }
                    }
                }
            }
        }
    }
}

```

faceting.facets.[facetName].renderingInstruction

**Type** cObject

**TS Path** plugin.tx\_solr.search.faceting.facets.[facetName].renderingInstruction

**Since** 1.0

Overwrites how single facet options are rendered using TypoScript cObjects.

Example: (taken from issue #5920)

```
plugin.tx_solr {
    search {
        faceting {
            facets {
                type {
                    renderingInstruction = CASE
                    renderingInstruction {
                        key.field = optionValue

                        pages = TEXT
                        pages.value = Pages
                        pages.lang.de = Seiten

                        tx_solr_file = TEXT
                        tx_solr_file.value = Files
                        tx_solr_file.lang.de = Dateien

                        tt_news = TEXT
                        tt_news.value = News
                        tt_news.lang.de = Nachrichten
                    }
                }
            }

            language {
                renderingInstruction = CASE
                renderingInstruction {
                    key.field = optionValue

                    0 = TEXT
                    0.value = English
                    0.lang.de = Englisch

                    1 = TEXT
                    1.value = German
                    1.lang.de = Deutsch
                }
            }
        }
    }
}
```

EXT:solr provides the following renderingInstructions that you can use in your project:

#### **FormatDate:**

This rendering instruction can be used in combination with a date field or an integer field that hold a timestamp. You can use this rendering instruction to format the facet value on rendering. A common usecase for this is, when the datatype in solr needs to be sortable (date or int) but you need to render the date as readable date option in the frontend:

```

plugin.tx_solr.search.faceting.facets {
    created {
        field = created
        label = Created
        sortBy = alpha
        reverseOrder = 1
        renderingInstruction = TEXT
        renderingInstruction {
            field = optionValue
            postUserFunc =
                ApacheSolrForTypo3\Solr\Domain\Search\ResultSet\Facets\RenderingInstructions\FormatDate-
                >format
        }
    }
}

```

### 8.6.15 elevation

elevation

**Type** Boolean

**TS Path** plugin.tx\_solr.search.elevation

**Since** 3.0

**Default** 0

Set plugin.tx\_solr.search.elevation = 1 to enable content elevation in search results.

elevation.forceElevation

**Type** Boolean

**TS Path** plugin.tx\_solr.search.elevation.forceElevation

**Since** 3.0

**Default** 1

Forces content elevation to be active.

elevation.markElevatedResults

**Type** Boolean

**TS Path** plugin.tx\_solr.search.elevation.markElevatedResults

**Since** 3.0

**Default** 1

If enabled, elevated results are marked with CSS class “results-elevated”.

### 8.6.16 variants

By using variants you can shrink down multiple documents with the same value in one field into one document and make similar documents available in the variants property. By default the field variantId is used as Solr collapsing criteria. This can be used e.g. as one approach of deduplication to group similar documents into on “root” SearchResult.

To use the different variants of the documents you can access “document.variants” to access the expanded documents.

This can be used for example for de-duplication to list variants of the same document below a certain document.

Note: Internally this is implemented with Solr field collapsing

**Type** Boolean**TS Path** plugin.tx\_solr.search.variants**Since** 6.0**Default** 0

Set plugin.tx\_solr.search.variants = 1 to enable the variants in search results.

variants.expand

Used to expand the document variants to the document.variants property.

**Type** Boolean**TS Path** plugin.tx\_solr.search.variants.expand**Since** 6.0**Default** 1

variants.variantField

Used to expand the document variants to the document.variants property.

**Note::** The field must be a numeric field or a string field! Not a text field!

**Type** String**TS Path** plugin.tx\_solr.search.variants.variantField**Since** 6.0**Default** variantId

variants.limit

Limit of expanded documents.

Though this setting limits the returned variants, you still can get the number of existing variants, it's set in "document.variantsNumFound" (since EXT:solr 10)

**Type** Integer**TS Path** plugin.tx\_solr.search.variants.limit**Since** 6.0**Default** 10

## 8.7 tx\_solr.suggest

This feature allows you to show a suggest layer that suggest terms that start with the letters that have been typed into the search field

### 8.7.1 numberOfSuggestions

**Type** Integer**TS Path** plugin.tx\_solr.suggest.numberOfSuggestions**Since** 1.1**Default** 10

Sets the number of suggestions returned and displayed in the layer attached to the search field.

### 8.7.2 suggestField

**Type** String

**TS Path** plugin.tx\_solr.suggest.suggestField

**Since** 1.1

**Default** spell

Sets the Solr index field used to get suggestions from. A general advice is to use a field without stemming on it. For practical reasons this is currently the spell checker field.

Note: With EXT:solr 11.1.0 ASCII folding and language depending normalization filters were introduced, but due to the special behaviour of the auto suggestions `ascii-terms` were not treated correctly. So with 11.1.3 the untouched tokens are also kept, as this might lead to duplicate suggestions, a new field for exact suggestions is introduced, if you want to avoid duplicates and use stricter suggestions, just configure `spellExact` as suggest field.

### 8.7.3 forceHttps

**Type** Boolean

**TS Path** plugin.tx\_solr.suggest.forceHttps

**Since** 1.1

**Default** 0

**Options** 0,1

If enabled, HTTPS will be used for querying suggestions. Otherwise HTTP will be used.

### 8.7.4 treatMultipleTermsAsSingleTerm

**Type** Boolean

**TS Path** plugin.tx\_solr.suggest.treatMultipleTermsAsSingleTerm

**Since** 1.4 / 1.7-dkd

**Default** 0

**Options** 0,1

When a user types multiple words into your search field they usually are split up into full keywords used in the query's `q` parameter and the last part being the partial keyword in the `facet.prefix` parameter. Enabling this setting moves everything into the `facet.prefix` parameter. This is usually only useful when using a string field as suggest / auto-complete source field.

Example - Here "Hello Solr" are the full keywords and the user started typing "World" so that "Wo" is used as the partial keyword:

"Hello Solr Wo" -> `q=Hello Solr, facet.prefix=Wo` (default) "Hello Solr Wo" -> `q=<empty>, facet.prefix=Hello Solr Wo` (treatMultipleTermsAsSingleTerm)

### 8.7.5 showTopResults

**Type** Boolean

**TS Path** plugin.tx\_solr.suggest.showTopResults

**Since** 8.0

**Default** 1

When this setting is enabled, the top results are shown in the suggest layer. The top results are build from the first search match, or when the first search delivers no hit, the results from the first suggestion are shown.

### 8.7.6 numberOfTopResults

**Type** Integer

**TS Path** plugin.tx\_solr.suggest.numberOfTopResults

**Since** 8.0

**Default** 5

Defines the number of top results that will be shown.

### 8.7.7 additionalTopResultsFields

**Type** String

**TS Path** plugin.tx\_solr.suggest.additionalTopResultsFields

**Since** 9.0

Comma-separated list of fields that should be added to the top results response json.

## 8.8 tx\_solr.statistics

This section allows you to configure the logging for statistics.

**Note:** The statistics are logged into a mysql table. This might not make sense for high frequently used searches. In this case you should think about to connect a dedicated tracking tool.

### 8.8.1 statistics

**Type** Boolean

**TS Path** plugin.tx\_solr.statistics

**Since** 2.0

**Default** 0

Set `plugin.tx_solr.statistics = 1` to log statistics.

### 8.8.2 statistics.anonymizeIP

**Type** Integer

**TS Path** plugin.tx\_solr.statistics.anonymizeIP

**Since** 2.0

**Default** 0

Allowed values are 0 (masking disabled), 1 (mask host), 2 (mask host and subnet).

### 8.8.3 statistics.addDebugData

**Type** Boolean

**TS Path** plugin.tx\_solr.statistics.addDebugData

**Since** 6.1

**Default** 0

Adds debug data to the columns `time_total`, `time_preparation` and `time_processing` in the table `tx_solr_statistics` from the result of the search query.

**Note:** Enabling `addDebugData` can have performance impact since `debugMode` is appended to queries.

## 8.9 tx\_solr.logging

This section defines logging options. All loggings will be available in the TYPO3 logging framework.

- *debugOutput*
- *exceptions*
- *indexing*
- *indexing.indexQueueInitialization*
- *indexing.indexQueuePageIndexerGetData*
- *indexing.pageIndexed*
- *query.filters*
- *query.searchWords*
- *query.queryString*
- *query.rawPost*
- *query.rawGet*

### 8.9.1 debugOutput

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.debugOutput

**Default** 0

**Options** 0,1

**Since** 6.1

If enabled the written log entries will be printed out as debug message in the frontend or to the TYPO3 debug console in the backend. This setting replaces the previous setting `plugin.tx_solr.logging.debugDevLogOutput` which was needed, when the devLog was used.

### 8.9.2 exceptions

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.exceptions

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, thrown exceptions are logged.

### 8.9.3 indexing

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.indexing

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, logs when pages / documents are indexed.

#### 8.9.4 indexing.indexQueueInitialization

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.indexing.indexQueueInitialization

**Default** 1

**Options** 0,1

**Since** 2.0

If enabled, logs the query used to initialize the indexing queue.

#### 8.9.5 indexing.indexQueuePageIndexerGetData

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.indexing.indexQueuePageIndexerGetData

**Default** 1

**Options** 0,1

**Since** 2.0

If enabled, the requested data will be logged. Request data includes item, url, parameters, headers, data, decodedData and report.

#### 8.9.6 indexing.pageIndexed

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.indexing.pageIndexed

**Default** 0

**Options** 0,1

**Since** 2.0

If enabled, it will be logged if a page was indexed successful or not. Additionally, an error is logged if indexing is disabled (via `config.index_enable`)

#### 8.9.7 query.filters

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.query.filters

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, filters will be logged when they get added to the Solr query.

#### 8.9.8 query.searchWords

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.query.searchWords

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, received search queries will be logged.

#### 8.9.9 query.queryString

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.query.queryString

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, query string parameters and the respective response will be logged.

#### 8.9.10 query.rawPost

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.query.rawPost

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, POST requests against the Solr server will be logged.

#### 8.9.11 query.rawGet

**Type** Boolean

**TS Path** plugin.tx\_solr.logging.query.rawGet

**Default** 1

**Options** 0,1

**Since** 1.0

If enabled, GET requests against the Solr server will be logged.

### 8.10 Extension Configuration

The following settings can be defined in the “Settings”->”Extension Configuration”->”solr”

#### 8.10.1 useConfigurationFromClosestTemplate

**Type** Boolean

**Since** 6.1

**Default** 0

When this setting is active the closest page with a typoscript template will be used to fetch the configuration. This improves the performance but limits also the possibilities. E.g. conditions can not be used that are related to a certain page.

#### 8.10.2 useConfigurationTrackRecordsOutsideSiteroot

**Type** Boolean

**Since** 6.1

**Default** 1

A common common scenario is to have a site and a storage folder for records parallel to it on the same level (f.e.) If you don't want this behaviour - it should be set to false.

### 8.10.3 allowSelfSignedCertificates

**Type** Boolean

**Since** 6.1

**Default** 0

Can be used to allow self signed certificates - when using the SSL protocol.

### 8.10.4 allowLegacySiteMode

**Type** Boolean

**Since** 10.0

**Default** 0

Can be used to allow using classic TypoScript Configuration for Sites.

### 8.10.5 monitoringType

**Type** Int

**Since** 11.2

**Default** 0

Defines how data updates should be monitored

By default (=0) recognized updates will be processed directly and the Solr index queue will be directly updated, also the Solr index where appropriate. As in huge instances the monitoring can slow down the TYPO3 backend, two more monitoring options are available:

- **Delayed:** Record update events will be queue and processed later, the scheduler task “Event Queue Worker” is required for processing.
- **No monitoring:** Monitoring is completely disabled, please note that you have to take care of Solr index updates yourself.

## 8.11 Solr Connection

EXT:solr uses the TYPO3 PSR-7 client to connect to the Solr server.

You can apply additional configuration for proxy settings using `$GLOBALS['TYPO3_CONF_VARS']['HTTP']`.

---

**Tip:** For more details about Guzzle settings and TYPO3 implementation see

- <https://docs.guzzlephp.org/en/latest/request-options.html>
  - <https://docs.typo3.org/m/typo3/reference-coreapi/10.4/en-us/ApiOverview/Http/Index.html>
-



## DATABASE

### 9.1 Database indexes

Some of the SQL statements performed on the pages table in TYPO3 perform extensive operations while copying page-trees. These operations can be speeded up by adding 2 indexes to the standard table pages.

The indexes are: \* content\_from\_pid\_deleted (content\_from\_pid, deleted), \* doktype\_no\_search\_deleted (doktype, no\_search, deleted)

It is not required that these indexes are created by in above scenarios considerable performance gains can be achieved.



## DEVELOPMENT

There are many ways to extend and hook into EXT:solr to customize EXT:solr for your needs.

### 10.1 Indexing

In this section i describe the possibilities to extend page indexing in EXT:solr with custom code.

#### 10.1.1 Page Indexing

There are several points to extend the Typo3PageIndexer class and register own classes that are used during the indexing.

##### indexPageAddDocuments

Registered classes can be used to add additional documents to solr when a page get's indexed.

Registration with: `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['Indexer']['indexPageAddDocuments']`  
Required Interface: `AdditionalPageIndexer`

##### indexPageSubstitutePageDocument

Registered classes can be used to replace/substitute a Solr document of a page.

Registration with: `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['Indexer']['indexPageSubstitutePageDocument']`  
Required Interface: `SubstitutePageIndexer`

##### indexPagePostProcessPageDocument

Registered classes can be used to post process a Solr document of a page.

Registration with: `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['Indexer']['indexPagePostProcessPageDocument']`  
Required Interface: `PageDocumentPostProcessor`

#### 10.1.2 Independent indexer

If external data should be indexed or the RecordIndexer is not required, it is possible to fill the index with an extension as well. The class can then be called e.g. by a CLI call.

```
<?php
namespace Vendor\ExtensionName\Import;

use ApacheSolrForTypo3\Solr\ConnectionManager;
use ApacheSolrForTypo3\Solr\Domain\Site\SiteRepository;
use ApacheSolrForTypo3\Solr\System\Solr\Document\Document;
use ApacheSolrForTypo3\Solr\System\Solr\SolrConnection;
use TYPO3\CMS\Core\Utility\GeneralUtility;
```

```

class Indexer
{
    /** @var ConnectionManager */
    protected $connectionManager;

    public function __construct()
    {
        $this->connectionManager =
↳GeneralUtility::makeInstance(ConnectionManager::class);
    }

    /**
     * Send data to solr index
     *
     * @param array $rows Data to be indexed, e.g. multiple DB rows
     * @param int $pageId root page
     * @param int $language language id
     */
    public function index(array $rows, int $pageId = 1, int $language = 0)
    {
        $documents = [];

        foreach ($rows as $row) {
            $documents[] = $this->createDocument($row, $pageId);
        }

        $connection = $this->connectionManager->getConnectionByPageId($pageId,
↳$language);
        $connection->getWriteService()->addDocuments($documents);
    }

    /**
     * Remove all from index
     *
     * @throws \ApacheSolrForTypo3\Solr\NoSolrConnectionFoundException
     */
    public function clearIndex() {
        $connections = $this->connectionManager->getAllConnections();
        foreach ($connections as $connectionLanguage => $connection) {
            /** @var SolrConnection */
            $connection->getWriteService()->deleteByType('cutom_type');
        }
    }

    /**
     * Create a solr document which then is sent to solr
     *
     * @param array $row
     * @param int $pageId
     * @return Document
     */
    protected function createDocument(array $row, int $pageId): Document
    {
        $document = $this->getBaseDocument($row, $pageId);

        $solrFieldMapping = [
            'title' => 'title',
            'summary' => 'abstract',
            'information' => 'content',
            'keywords' => 'keywords',
            'area' => 'area_stringS',
        ];
    }
}

```

```

        'category' => 'category_stringS'
    ];

    foreach ($row as $key => $value) {
        if (isset($solrFieldMapping[$key])) {
            $document->setField($solrFieldMapping[$key], $value);
        }
    }

    // url generation
    $document->setField('url', 'todo'); // custom implementation required

    return $document;
}

/**
 * Creates a Solr document with the basic / core fields set already.
 *
 * @param array $itemRecord The record to use to build the base document
 * @param int $rootPageId root page id
 * @return Document A basic Solr document
 */
protected function getBaseDocument(array $itemRecord, int $rootPageId): Document
{
    $siteRepository = GeneralUtility::makeInstance(SiteRepository::class);
    $site = $siteRepository->getSiteByRootPageId($rootPageId);

    /** @var $document Document */
    $document = GeneralUtility::makeInstance(Document::class);

    // required fields
    $document->setField('id', 'cutom_type_' . $itemRecord['uid']);
    $document->setField('variantId', 'cutom_type_' . $itemRecord['uid']);
    $document->setField('type', 'cutom_type');
    $document->setField('appKey', 'EXT:solr');
    $document->setField('access', ['r:0']);

    // site, siteHash
    $document->setField('site', $site->getDomain());
    $document->setField('siteHash', $site->getSiteHash());

    // uid, pid
    $document->setField('uid', $itemRecord['uid']);
    $document->setField('pid', 1);

    return $document;
}
}

```

## 10.2 Developing Backend Modules

### 10.2.1 Backend Components

EXT:solr provides UI components for backend modules. Some components hold (GUI)state and some not, but all components calling actions(changing the extension and/or GUI state!), and then redirecting to the actions within the component was used(referrer also) or to the defined by callers action uri, if that is required by UX.

Below are all available components listed and their responsibility.

## CoreSelector

Renders menu in backends doc header with available Solr cores for selected Site and changes the solr core by clicking on option in drop down menu.

- Provides following methods, which must be called inside the *initializeView(...)* method in your controller to render this component in Backend:
  - *generateCoreSelectorMenuUsingSiteSelector()*
    - \* Use this method together with SiteSelectorMenu component.
  - *generateCoreSelectorMenuUsingPageTree()*
    - \* Use this method if you are using original page tree from CMS.
- Provides following Actions for changing state, must be added to actions list of your controller:
  - *switchCore*
- Provides following fully initialized properties in utilizing action controller:
  - *\$selectedSolrCoreConnection from type ApacheSolrForTypo3SolrSolrService*

If you need the possibility to switch the core, you can extend the AbstractModuleController (in ApacheSolrForTypo3SolrControllerBackendSearch).

## 10.2.2 FAQ

### Why should I add some action name to my action controller?

To allow calling this action within your controller, component can use own controller for changing state only if that is hardcoded with some module and allowed by ACL for all(or almost all) be users/groups, but this is a bag approach. Therefore allow changing something, only if that is needed.

### What do I need to do for using Backend Components?

By extending ApacheSolrForTypo3SolrControllerBackendSearchAbstractModuleController your module has the pagetree (to select the side) and the core selector, to select the needed solr core.

## 10.3 Development Environment

To simplify the development for TYPO3 and solr related components we provide a development environment based on vagrant and the Homestead box of the TYPO3 core.

You can find the development box in the following git repository:

<https://github.com/TYPO3-Solr/solr-typo3-devbox>

When you start the box, you will find a pre-configured environment for the support TYPO3 LTS version and the solr installation that is needed for the installed EXT:solr version.

## 10.4 Testing and Continues Integration

The goal during the development of EXT:solr is, to test most of the components with unit and integration tests.

### 10.4.1 Unit Tests

For the single classes we've added unit tests whenever we thought it is useful. The unit tests should run very quickly, to get a quick response.

## 10.4.2 Integration Tests

As in EXT:solr the integration tests are more complex and test the integration of the different components. Since a database server and a solr server is required this is needed to run the integration test suite. During the bootstrap of the test environment, we use the TYPO3 core functionality for database tests and we install a local solr server with out install script.

To simplify the local usage of the unit and integration tests, we ship a few bash script that support you to get everything started.

## 10.4.3 Bootstrapping the Test Environment

When you want to start the testrunner in your shell you need to bootstrap it once:

```
source ./Build/Test/bootstrap.sh --local
```

The bootstrapper will prompt for some values:

```

/v/w/7/t/e/solrfluid git:feature/add-documentation $ source ./Build/Test/bootstrap.sh --local
Choose a TYPO3 Version (e.g. dev-master,-6.2.17,-7.6.5): -7.6.9
Choose a EXT:solr Version (e.g. dev-master,-3.1.1): dev-master
Choose a database hostname: localhost
Choose a database name: test
Choose a database user: root
Choose a database password: supersecret
You are running composer with debug enabled. This has a major impact on runtime performance. See https://getcomposer.org/debug
./composer.json has been updated
Loading composer repositories with package information
Updating dependencies (including require-dev)

```

When the bootstrapper was finished successful the following was done:

- Environment variables for the TYPO3 testing framework have been exported
- Test database was created
- Test solr instance was created

Afterwards you can run the ci suite in your shell

## 10.4.4 Running the ci Suite

When the test environment was bootstrapped correctly you can start the test runner:

```
./Build/Test/cibuild.sh
```

When everything is configured correctly all tests should run through and you should get a green bar:

```

/v/w/7/t/e/solrfluid git:feature/add-documentation $ ./Build/Test/cibuild.sh
PWD: /var/www/7.6.local.typo3.org/typo3conf/ext/solrfluid
Run unit tests
PHPUnit 5.3.4 by Sebastian Bergmann and contributors.

..... 65 / 70 ( 92%)
..... 70 / 70 (100%)

Time: 3.96 seconds, Memory: 29.50MB

OK 170 tests, 145 assertions

Generating code coverage report in HTML format ... done
Run integration tests
PHPUnit 5.3.4 by Sebastian Bergmann and contributors.

..... 23 / 23 (100%)

Time: 3.42 minutes, Memory: 14.25MB

OK 123 tests, 71 assertions

Generating code coverage report in HTML format ... done

```

## 10.5 Code Structure

The components of EXT:solrfluid have been developed with the domain driven design (DDD) approach ([https://de.wikipedia.org/wiki/Domain-driven\\_Design](https://de.wikipedia.org/wiki/Domain-driven_Design)) for our extension we tried to separate the code by the following layers:

- **Domain:** Everything that is related to the “search” domain should be implemented here.
- **System:** Everything that is related to the “system” (e.g. TYPO3 specific) should be implemented here.

### 10.5.1 Domain Layer & Domain Model

The classes of the domain layer are located in “Classes/Domain” and should contain everything that is related to the “search domain”.

#### ResultSet

The “SearchResultSet” is the main entity that you get passed to the view. It can be used to access all search related objects on your result page.

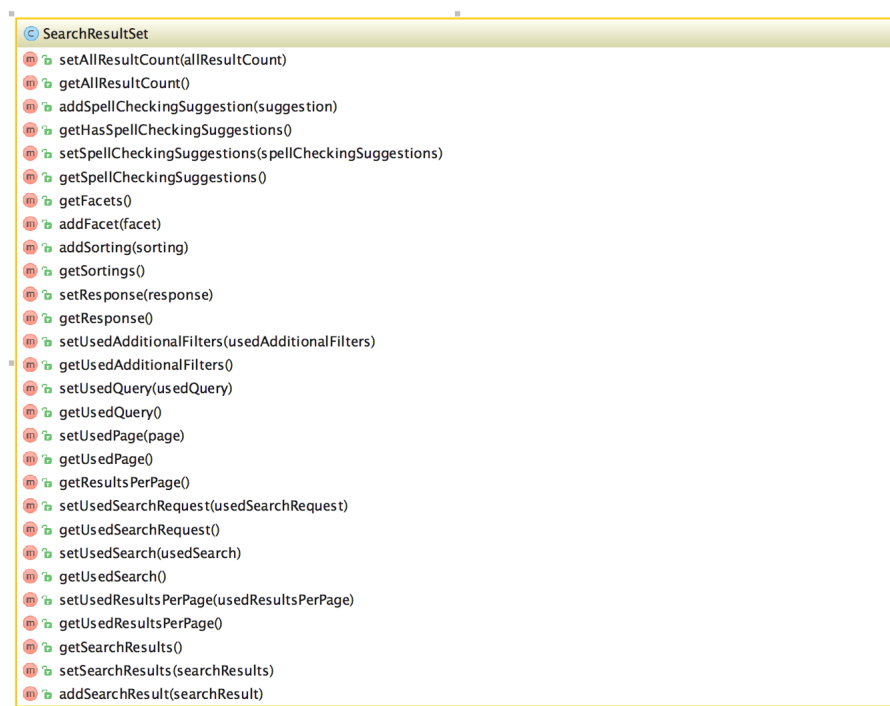


Fig. 10.1: UML diagram of the SearchResutSet

The SearchResultSet can be used e.g. to get facets and spelling suggestions. A focus for the first release was a new domain model for facets, that can be rendered with fluid or any other template engine.

#### Facets

The following UML diagram shows the implemented facets in EXT:solrfluid. Every facet has one or more facet items attached. For the **OptionsFacet** the FacetItem is an **Option**, for the **NumericRangeFacet** a **NumericRange**.

Rendering of a facet:

Based on the “**type**” TypoScript configuration the “**FacetRegistry**” chooses the responsible facet package class that is used to create the object structure from the solr reponse. Each facet type is shipped with a default fluid partial, that is able to render such a facet.

A facet package consists of the following parts:

- The facet parser: Responsible to parse the apache solr response into a domain object structure
- The url decoder: Responsible to decode the url fragment of the facet in EXT:solr
- The query builder: Responsible to build the needed query fragment for Apache Solr to apply the facet

The typoscript configuration “**partialName**” can be used to force the rendering with another fluid partial.

For advanced use cases you can use the “**FacetRegistry**” to register your own facet type or overwrite the facet behaviour for a certain facet type.

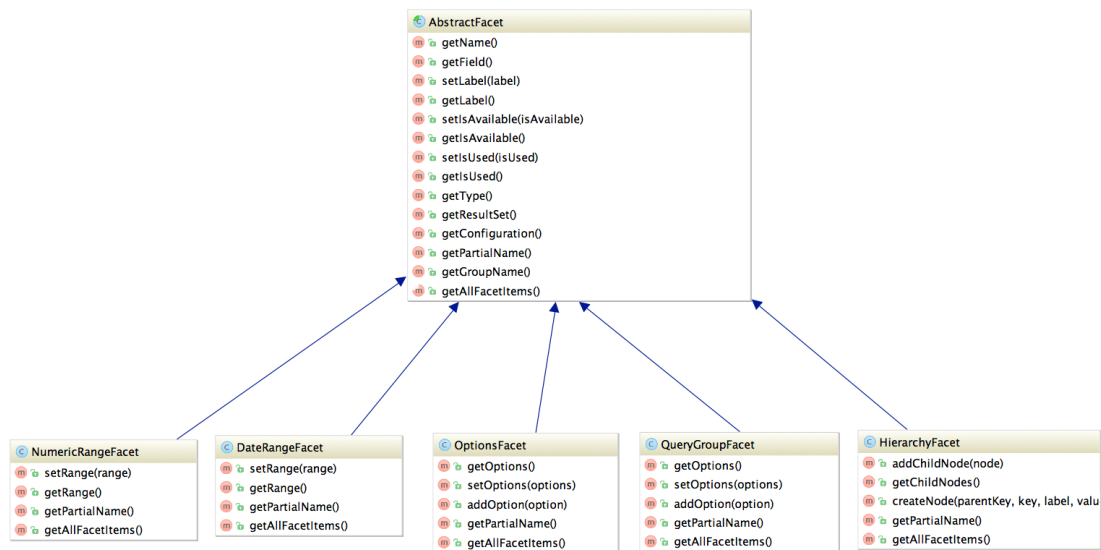


Fig. 10.2: UML diagram of the \*Facet classes

As you see in the diagram above solr ships a clean object structure of the facets, that you can render in your custom templates as you need them.

## 10.6 Signals

Signals are currently only used in the search controller. Every action emits a signal which can be used to change its variables assigned to the view.

### 10.6.1 Example

As an example, the action `resultsAction` of the `Classes/Controller/SearchController` is used.

```

$values = [
    'hasSearched' => $this->searchService->getHasSearched(),
    'additionalFilters' => $this->searchService->getAdditionalFilters(),
    'resultSet' => $searchResultSet,
    'pluginNamespace' => $this->typoScriptConfiguration->
->getSearchPluginNamespace()
];

$values = $this->emitActionSignal(__CLASS__, __FUNCTION__, [$values]);
  
```

To fulfill that signal, you can create a slot in your custom extension. All what it needs is an entry in your `ext_localconf.php` file:

```

/** @var \TYPO3\CMS\Extbase\SignalSlot\Dispatcher $signalSlotDispatcher */
$signalSlotDispatcher =
->\TYPO3\CMS\Core\Utility\GeneralUtility::makeInstance(\TYPO3\CMS\Extbase\SignalSlot\Dispatcher::class);
$signalSlotDispatcher->connect(
    \ApacheSolrForTypo3\Solr\Controller\SearchController::class,
    'resultsAction',
    \YourVendor\yourextkey\Slot\SearchControllerSlot::class, // fully your choice
    'resultsActionSlot', // fully your choice
);
  
```

An example call look like this:

```
/**
 * @param array $values
 */
public function resultsActionSlot($values) {
    $values['foo'] = 'bar'

    return [$values];
}
```

Notice: The values array needs to be returned as an single element of an array, because a slot method has to return the same number of arguments like it received.

## 10.7 Events

In version 11 we started with the implementation of events, using the EventDispatcher (PSR-14 Events).

Step by step the events will replace older hooks and signals. In the following you will find a description of the available events

### 10.7.1 Monitoring

Observing and processing of data updates is controlled by the following events:

- ContentElementDeletedEvent, fired if a content element is deleted
- PageMovedEvent, fired if a page is moved
- RecordDeletedEvent, fired if a record is deleted
- RecordGarbageCheckEvent, fired if a record garbage check is triggered
- RecordMovedEvent, fired if a record is moved
- VersionSwappedEvent, fired if a version is swapped

All events implement the DataUpdateEventInterface and at least provide information about the elements uid, table and modified fields.

### 10.7.2 Data update processing

#### ProcessingFinishedEvent

The ProcessingFinishedEvent indicates that the processing of a data update event is finished, if you want to implement an own monitoring you can use the ProcessingFinishedEvent to start the processing. The event provides the originally fired data update events listed above, so that you have all the required information about the update to process.

If you're using the event you're indepent of the monitoring setting, as this event if fired in the immediate and delayed monitoring mode as soon as an event is processed.

#### DelayedProcessingQueuingFinishedEvent / DelayedProcessingFinishedEvent

If you're using the delayed processing (see "monitoringType"), you can use one of the following events:

**DelayedProcessingQueuingFinishedEvent** This event is fired as soon as the update event is queued in the event queue (tx\_solr\_eventqueue\_item), you can e.g. use this event to register own events or to implement processing that has to executed immediately even in delayed monitoring mode.

**DelayedProcessingFinishedEvent** The Scheduler task "Event Queue Worker" is required to process the data updates in delayed monitoring mode and will fire the DelayedProcessingFinishedEvent as soon as an event has been processed. If you require to perform actions only during delayed processing, the event can be used.

### 10.7.3 SearchUriBuilder

The SearchUriBuilder is responsible to build uris, that are used in the searchContext. Since the route enhancer is introduced you can use the following event to influence the build uris:

- BeforeReplaceVariableInCachedUriEvent
- BeforeProcessCachedVariablesEvent
- PostProcessUriEvent

## 10.8 ViewHelpers

Beside the controllers, the domain objects and the templates we ship a few useful view helpers. To avoid a strong coupling between the extension and fluid as template engine we tried to keep all ViewHelpers as “slim” as possible. Whenever it was possible we moved the logic into custom service classes and just use them in the ViewHelper.

Since everything belongs to the “**SearchResultSet**” and we wanted to avoid the need of passing this object around from “template to template” and “partial to partial” we decided to provide an own “ControllerContext” that referenced the “SearchResultSet”. With this approach, it is possible to access the “**SearchResultSet**” in every ViewHelper.

With the current release we ship the following concrete ViewHelpers:

Path	Description
s:debug.documentScoreAnalyzer	Used to render the score analysis.
s:debug.query	Shows the solr query debug information.
s:document.highlightResult	Performs the highlighting on a document.
s:document.relevance	Shows the relevance information for a document.
s:facet.area.group	Filters the facets in the rendering scope to one group.
s:facet.options.group.prefix.labelPrefixes	Provides an array of available label prefixes that can be used to filter with s:facet.options.group.prefix.labelFilter.
s:facet.options.group.prefix.labelFilter	Filters the options of a facet by a given prefix.
s:uri.facet.addFacetItem	Add's a facet item to the current url.
s:uri.facet.removeAllFacets	Removes all facet items from the current url.
s:uri.facet.removeFacet	Removes all options from one facet.
s:uri.facet.removeFacetItem	Removes a single facet item from the url.
s:uri.facet.setFacetItem	Sets one single item for a facet (and removes other setted)
s:uri.paginate.resultPage	Creates a link to a result page of the current search.
s:uri.search.currentSearch	Creates a link to the current search (with facets, sorting...)
s:uri.search.startNewSearch	Creates a link for a new search by a term.
s:uri.sorting.removeSorting	Creates a link to the current search and removes the sorting.
s:uri.sorting.setSorting	Creates a link to the current search and sets a new sorting.
s:pageBrowserRange	Provides the range data for the pagination.
s:searchForm	Renders the searchForm.
s:translate	Custom translate ViewHelper (uses translations from ext:solr)



## FAQ - FREQUENTLY ASKED QUESTIONS

**What does the term “Core”<<https://cwiki.apache.org/confluence/display/solr/Solr+Cores+and+solr.xml>> mean?**

This term relates to Apache Solr indexes and means a single distinct part of an index. It is possible to use multiple cores on one single Apache Solr instance. Good examples are using a different Apache Solr core for each language or of course a separate core for each website. For more informations please refer to the Apache Solr documentation.

**Where can I report a bug?**

Please make sure that this bug is not reported already, use also the search function of our issue tracker. Our issue tracker is on [GitHub](#).

**Where can I report a security issue?**

If you have found a security issue in our extension, please do not post about it in a public channel. Please send an email to the [TYPO3 security team](#) with detailed description of found vulnerability. For more details about security issue handling see <https://typo3.org/teams/security/contact-us/>

**Is there some chat/irc channel for EXT:solr available?**

Join us on the official [Slack for TYPO3](#) and get answers related to EXT:solr in the #ext-solr channel immediately!

**Which plugins(TYPO3 Frontend) are available?**

- Search: Form only
- Search: Form, Result, Additional Components
- Search: Frequent Searches

Just insert one of this plugins on corresponding page to fade in the search form and/or supply the front end with a search results.

### **When i open the search page i see the message ‘Search is currently not available. ‘, whats wrong?**

Did you configure your solr connection as required?

- Please read “*Configure Extension*” and check if you have configured everything
- Did you configure solr server and port and does the scheme and path match?
- Did you click “Initialize connection” after configuring the solr server?
- Can you access the solr server with wget or curl from the command line?
- Is the system report of EXT:solr green?

### **In which cases do I want to trigger indexing manually?**

- after changing any configuration file.
- after modifying synonyms, stop words, protected words in TYPO3 Backend -> Search

Moreover by changing core/index configuration you need to reload the core to make the changes become active. To reload configuration you can either restart the whole Solr server or simply reload a specific core.

### **I want to index files with EXT:solr. How can i do that?**

We provide an addon called EXT:solrfal, that allows you to index files from FAL into Solr. This addon is currently available for partner only.

### **How can i use Fluid templates with EXT:solr < v7.0.0?**

For the Fluid rendering in EXT:Solr  $\geq 5.0 \leq 6.1$  we provide the addon EXT:solrfuid, that allows you to render your search results with Fluid. Since EXT:Solr 7.0 Fluid is the default templating engine.

### **Which versions of EXT:solr / EXT:solrfal and EXT:solrfuid work together?**

Please check the *Appendix - Version Matrix*, the you can find the proposed version combinations.

**Pages are not indexed. I did everything by the book.**

You forgot to set `config.index_enable = 1` in your TypoScript setup: *Enable indexing*

**My indexed documents are empty, i can not find the content of a page?**

Did you configure the search markers (“<!-- TYPO3SEARCH\_begin ->” and “<!-- TYPO3SEARCH\_end ->”) on your page? Check the paragraph *Search Markers* and make sure your page renders them.

**I have languages in TYPO3 that are not relevant for the search. How can i exclude them?**

You need to enable the search just for the relevant languages.

Example:

```
plugin.tx_solr.enabled = 0

[globalVar = GP:L = 0]
    plugin.tx_solr {
        enabled = 1
        solr.path = /solr/core_de/
    }
[globalVar = GP:L = 8|9]
    plugin.tx_solr {
        enabled = 1
        solr.path = /solr/core_en/
    }
[END]
```

**The extension is indexing into the wrong core for multi-language sites. What’s wrong?**

When indexing pages the page indexer retrieves the core from the TypoScript configuration. That configuration is determined by the language (GET L parameter). However, when the indexer tries to index a page that has not been translated TYPO3 will by default still render the page but falling back to the default language page. By that TYPO3 will also use the TypoScript configuration for the default language which usually points to a different Solr core.

Solution: Make sure you have configured `config.sys_language_mode` to use `content_fallback`. This way TYPO3 will fall back to the configured language’s content, but will use the TypoScript configuration for the requested language.

**When i change a record, no update is detected. What’s wrong?**

Are your records inside of your site root? EXT:solr record monitor processes records that belong to your site, which means they need to be below your site root. If you want to index records that are outside your sideroot, you need to configure the page id’s of the sysfolder as `additionalPageIds`:

```
plugin.tx_solr.index.queue.[yourQueueName].additionalPageIds = 4711,4712
```

### There are two datatypes for text stringS and textS. When should i choose which datatype?

String data types like stringS store the *raw* string. No processing, like stemming, splitting etc. is applied. The processing is useful when you want to search in the field and support more than exact matches. When you just want to display the content you should choose a *stringS* type, when you want to search in the field you should choose *textS*.

### I am adding content to a dynamic field but when i search for the content i can not find the document. What's wrong?

Beside the indexing part you need to configure the query part. Make sure that all relevant fields are configured as query fields:

```
plugin.tx_solr.search.query.queryFields := addToList(test_textS\^1.0)
```

### I don't find the expected document on the first position. What can i do?

:) That's a good question. In the end, solr is a search and the sorting depends on the score, not as in a database on one or two simple criterion.

In the end solr provides a lot of settings that influence the score calculation and you need to tune the results to you needs. The following settings are helpful to tune your results.

#### *Check your data*

The quality of you data is important. Maybe a document is on the first position because, the search term is really relevant for it? Maybe it is an option to change the content?

#### *Adjust the query field boost factors*

For each query field there is a boost value after the ^ sign. To increase the factor of a single field for the whole query, you can increase the number in the query fields.

Example:

```
plugin.tx_solr.search.query.queryFields = title^20.0, title^15.0
```

#### *Use boostFunctions or boostQueries*

For use cases like “*news* are always more important than *pages*” or “Newer documents should be at the beginning” you can use boostFunctions (*query.boostFunction*) or boostQueries (*query.boostQuery*)

*The search term only exists as a synonym*

You can use the backend module synonyms (*Synonyms*) to maintain synonyms and configure solr to retrieve documents by a term that is not naturally inside the document.

*Ask DKD support*

Beside that, there are more options to tune. The DKD support can help you, to analyze and tune your search results. Call +49 (0)69 - 247 52 18-0.

### **Non ASCII characters like german umlauts do not work when i search, how do I fix that?**

To allow search with umlauts Tomcat needs to be configured to use UTF-8 encoded urls. Go to apache-tomcat/conf/server.xml and change the URIEncoding parameter:

```
<Connector port="8080" protocol="HTTP/1.1"
  connectionTimeout="20000" redirectPort="8443"
  URIEncoding="UTF-8" />
```

### **How can I change Solr's schema and add custom fields?**

Please do not change the shipped solr schema. There are a lot of dynamic fields (*Appendix - Dynamic Fields*) that can be used to index any kind of datatype.

### **I am using varnish before my site. How can i index pages properly?**

SOLR Indexer might have some issues, when the page to index is behind a Varnish Proxy. We have collected two ways of solving this issue

*Bypassing varnish:*

Bypass when X-Tx-Solr-Iq is present

The SOLR indexer request send the header X-Tx-Solr-Iq.

To have bypass the Varnish caching, put this into your sub vcl\_recv part of the configuration

```
if (req.http.X-Tx-Solr-Iq) {
    return(pipe);
}
```

*Using Cache-Control:*

Put this into your sub vcl\_fetch part of the configuration

```
if (req.http.Cache-Control ~ "no-cache") {
    set beresp.ttl = 0s;
    # Make sure ESI includes are processed!
    esi;
    set beresp.http.X-Cacheable = "NO:force-reload";
    # Make sure that We remove all cache headers, so the Browser does not cache it.
    →for us!
    remove beresp.http.Cache-Control;
```

```

remove beresp.http.Expires;
remove beresp.http.Last-Modified;
remove beresp.http.ETag;
remove beresp.http.Pragma;

    return (deliver);
}

```

### I want to build the Dockerfile\_full image on my mac with a local volume, how can i do that?

The following example shows how to build the Dockerfile image and start a container with a mapped local volume (only for the data). This was tested with “Docker for Mac” (not Docker Toolbox). Before executing the example, make sure, that you have added “~/solrdata” as allowed volume in the docker configuration.

```

# build the image
docker build -t typo3-solr -f Docker/SolrServer/Dockerfile .

# create volume directory locally
mkdir -p ~/solrdata

# add solr group to volume directory
sudo chown :8983 ~/solrdata

# run docker container from image with volume
docker run -d -p 127.0.0.1:8282:8983 -v ~/solrdata:/var/solr/data/data typo3-solr

```

### Can i index a https (SSL) site?

Yes. You need a ssl certificate (can be self signed) and change the following setting:

```

plugin.tx_solr.index.queue.pages.indexer.frontendDataHelper.scheme = https

```

### I want to index a value into a multiValue field from a user function. How can i do that?

You can do that, by using SOLR\_MULTIVALUE

```

plugin.tx_solr.index.queue.indexConfigName {
    fields {
        somevalue_stringM = SOLR_MULTIVALUE
        somevalue_stringM {
            stdWrap.cObject = USER
            stdWrap.cObject.userFunc = Vendor\Ext\Classname->getValues
            separator=,
        }
    }
}

```

### How can i use a configuration from AdditionalConfiguration.php when i deploy my application on several instances?

The configuration of the connection is done with typoscript. When you want to use a configuration from `TYPO3_CONF_VARS` or from the system environment, you can apply an `stdWrap` on the configuration that reads from these configurations.

The following example shows how a host can be configured in the `AdditionalConfiguration.php` and used in your typoscript to connect to solr:

The following line is added to `AdditionalConfiguration.php`

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['host'] = 'mysolrserver.de';
```

To use this configuration for the host, you can use a `TEXT` element in the configuration and use `override.data` to use the value from the `AdditionalConfiguration.php`

```
plugin.tx_solr.solr {
    host = TEXT
    host {
        value = localhost
        override.data = global:TYPO3_CONF_VARS|EXTCONF|solr|host
    }
}
```

### **I want to index extension records, what do i need to do?**

EXT:solr provides a flexible indexing for TYPO3 pages and records. You can add a custom indexing configuration for your own records with a valid TCA configuration.

You can read more about this in the section *IndexQueue Configuration*.

The following things are important:

- The extension ships several examples in the Folder “Configuration/TypoScript/Examples”, read them and try to understand them.
- EXT:solr can not know the business logic of an extension to generate a link to a detail view. You need to use `typolink` to build an url that points to a valid, existing detail page.
- When you index records, e.g. news it these records are indexed in solr and point to a news details page. That’s the reason why it makes sence to exclude the news detail page from the normal page indexing. Otherwise the indexing of this page will produce an error message, because only a url with a valid news uid produces a valid output.

### **Are in EXT:solr some cli commands available?**

Yes, currently(v. 6.1) only one for initializing solr connections. But check for new ones with `bin/typo3 list` command.

### I want to overwrite the type field, why is this not possible?

The type field is a system field that EXT:solr uses to keep the system in sync. Overwriting this field might result in inconsistency. However, if you need something like a custom type you can also write the information to a dynamic solr field and use that one as a type.

The following example shows, how to fill the field “mytype\_stringS” and build a facet on this field:

```
plugin.tx_solr {
    index{
        queue{
            news = 1
            news {
                table = tt_news

                fields {
                    mytype_stringS = TEXT
                    mytype_stringS.value = news
                }
            }
        }
    }
    search.faceting.facets.mytype_stringS {
        label = Type
        field = mytype_stringS
    }
}
```

### I want to implement a toggle functionality for facet options as previously possible with selectingSelectedFace-OptionRemovesFilter. How can i do that?

This is completely possible with Fluid core ViewHelpers and the domain model. The following steps are required.

Register a custom partial to render the facet:

```
plugin.tx_solr.search.faceting.facets.<facetName>.partialName = OptionsToggle
```

This is the content of the OptionsToggle Partial (Feel free to adapt it to your needs):

```
<h5 class="facet-label">{facet.label}</h5>
<ul class="facet-option-list facet-type-options fluidfacet" data-facet-name="{facet.
→name}" data-facet-label="{facet.label}">
    <f:for each="{facet.options}" as="option" iteration="iteration">
        <li class="facet-option{f:if(condition:'{iteration.index} > 9', then:' tx-
→solr-facet-hidden')}" data-facet-item-value="{option.value}">
            <f:if condition="{option.selected}">
                <f:then><a class="facet solr-ajaxified" href="{s:uri.facet.
→removeFacetItem(facet: facet, facetItem: option)}">{option.label}</a></f:then>
                <f:else><a class="facet solr-ajaxified" href="{s:uri.facet.
→addFacetItem(facet: facet, facetItem: option)}">{option.label}</a></f:else>
            </f:if>
            <span class="facet-result-count">({option.documentCount})</span>
        </li>
    </f:for>
    <f:if condition="{facet.options -> f:count()} > 10">
        <li>
            <a href="#" class="tx-solr-facet-show-all" data-label-more="
→{s:translate(key:'faceting_showMore', extensionName:'solr')}">
```

```

        data-label-less="{s:translate(key:'faceting_showFewer',
->extensionName:'solr')}">
        <s:translate key="faceting_showMore" extensionName="solr">Show more
-></s:translate>
        </a>
    </li>
</f:if>
</ul>

```

### I want to store HTML in solr, how can i retrieve that?

In general it is not recommend to allow html in the solr field. Especially when you index content that can be changed by the user.

However, if you want to allow html in a solr field, you need to add the field as trusted field and the content will not be escaped during the retrieval from solr.

The following example shows how to avoid html in the content field:

```
plugin.tx_solr.search.trustedFields = url, content
```

Note: When you allow html in the content please make sure that the usage of crop ViewHelpers or a limit of the field length does not break your markup.

### I want to use two instances of the search plugin on the same page, how can i do that?

If you want to use two search plugins on the same page you can add two instances and assign a different “Plugin Namespace” in the flexform. If you want to avoid, that both plugins react on the global “q” parameter, you can disable this also in the flexform. Each instance is using the querystring from <pluginNamespace>[q] then.

### How can i configure switchable templates for the results plugin?

The following example shows, how you can configure a custom switchable entry template for the Results plugin:

```

plugin.tx_solr {
    view {
        templateRootPaths.100 = EXT:your_config_extension/Resources/Private/
->Templates/
        partialRootPaths.100 = EXT:your_config_extension/Resources/Private/Partials/
->
        layoutRootPaths.100 = EXT:your_config_extension/Resources/Private/Layouts/
        templateFiles {
            results = Results
            results.availableTemplates {
                default {
                    label = Default Searchresults Template
                    file = Results
                }
                products {
                    label = Products Template
                    file = ProductResults
                }
            }
        }
    }
}

```

### I want to use EXT:solr with a deployment and pass connection settings from outside e.g. by the environment, how can i do that?

When you deploy a system automatically and you use EXT:solr there are some things that might be complicated:

- You want to use a different solr endpoint for each environment
- EXT:solr depends on an existing domain record

To avoid that, you can set or generate these settings in the TYPO3 AdditionalConfiguration.php file and use them in your system.

To configure a used domain you can set:

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['sites'][###rootPageId###]['domains
↪'] = ['mydomain.com'];
```

You can also define the data for your solr endpoints there and use them in the typoscript:

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['sites'][###rootPageId###]['solrhost
↪'] = 'solr1.local';
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['sites'][###rootPageId###]['solrport
↪'] = 8083;
```

And use them in your TypoScript configuration:

```
plugin.tx_solr {
    solr {
        host = TEXT
        host {
            value = {$plugin.tx_solr.solr.host}
            override.data = global:TYPO3_CONF_VARS|EXTCONF|solr|sites|###rootPageId
↪###|solrhost
        }
        port = TEXT
        port {
            value = {$plugin.tx_solr.solr.port}
            override.data = global:TYPO3_CONF_VARS|EXTCONF|solr|sites|###rootPageId
↪###|solrport
        }
    }
}
```

### I want to use faceting.facets.[facetName].singleOptionMode why was it removed?

This setting belongs to the rendering and not to the facet itself. You can implement the same behaviour just with the given ViewHelpers.

The behaviour is the same, when you just call the ViewHelper `s:uri.facet.setFacetItem` instead of `s:uri.facet.addFacetItem`, which semantically just overwrites the current value.

We've added an example partial "OptionsSinglemode" that shows this behaviour. The example TypoScript template "Search - (Example) Options with singlemode (only one option at a time)" shows how to use this partial in combination with the setting "keepAllOptionsOnSelection".

### I want to build a tab facet where all options remain, even with an option count of 0. How can i do that?

This can be done with the combination of several settings:

```
plugin.tx_solr.search.faceting {
    minimumCount = 0
    keepAllFacetsOnSelection = 1
    facets {
        typeTab {
            field = type
            keepAllOptionsOnSelection = 1
        }
    }
}
```

The example above changes the `minimumCount` to 0, the default value is 1. Setting it to zero allows to have options without any results. The setting "keepAllFacetsOnSelection" let all facets remain and with `keepAllOptionsOnSelection` the options in the type facet remain.

**How can i add a searchbox on every page?**

In most projects you want to add a searchbox on every content page. To support this, the default EXT:solr typoscript template provides the typoscript template path “plugin.tx\_solr\_PiSearch\_Search” that contains a configured typoscript code to render the searchbox. When you want to add that to your project in the most cases you would need to refer to a search result page. The following example shows how you can build a typoscript lib object that configures the target page for this plugin instance:

```
lib.searchbox < plugin.tx_solr_PiSearch_Search
lib.searchbox.search.targetPage = 4711
```

Afterwards you could render the typoscript path “lib.searchbox” with several ways in TYPO3, e.g. with a FLUID ViewHelper:

```
<f:cObject typoscriptObjectPath="lib.searchbox" />
```

By adding the snippet to a generic template you could render the searchbox on every page.

**How can I index protected pages (htaccess protection)?**

Protected pages can be accessed by passing the htpasswd username and password to the indexing queue. You can set the credentials by the following configuration:

```
plugin.tx_solr.index.queue.pages.indexer.authorization.username = your_username
plugin.tx_solr.index.queue.pages.indexer.authorization.password = your_password
```

As credentials are stored as plain text, go for sure that your web server does not serve your TypoScript files publicly (protect the directory or by file endings). If you don’t want to store plain text passwords, you can configure your web server to allow access from a specific domain (see below).

If you have multiple domains to index, the webserver requires the credentials for each domain accessed by the solr indexer. The extension passes the credentials only once, so you will run into errors on a multi domain environment. Solution: Instead of passing the credentials as shown above, configure your webserver directory protection to allow access from the solr IP:

```
AuthType Basic
AuthUserFile /path/to/.htpasswd
<RequireAny>
    Require ip XXX.XX.XX.XX (the IP of the solr server)
    Require valid-user
</RequireAny>
```

Be aware, that this will allow all accesses by given IP.

**How can I use different host / port configurations in Solr v10 (e.g. for local environments)?**

While you could use TypoScript conditions to change the configuration for different project environments in the past, you can now use environment variables in the config.yaml like shown below.

In your sites config.yaml:

```
solr_host_read: '%env(SOLR_HOST)%'
solr_port_read: '%env(SOLR_PORT)%'
```

In your .env file:

```
SOLR_HOST=127.0.0.1
SOLR_PORT=8983
```

Refer to TYPO3 documentation: <https://docs.typo3.org/m/typo3/reference-coreapi/master/en-us/ApiOverview/SiteHandling/UsingEnvVars.html#using-environment-variables-in-site-configuration>

**How can i register a custom statistic writer processor?**

If the TypoScript option `plugin.tx_solr.statistics = 1` is activated, a `StatisticsWriterProcessor` is used by EXT:solr, which writes the queries into the database.

If there are more requirements for the statistics or if you want to write the data into another system, you can register your own `StatisticWriterProcessor` in the `ext_localconf.php` of the extension:

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['afterSearch']['statistics'] =
↳MyVendor\Namespace\Statistics\CustomStatisticsWriterProcessor::class;
```

The PHP class must have a certain structure, which is specified by the interface.

```
namespace MyVendor\Namespace;

use ApacheSolrForTypo3\Solr\Domain\Search\ResultSet\SearchResultSet;
use ApacheSolrForTypo3\Solr\Domain\Search\ResultSet\SearchResultSetProcessor;

class CustomStatisticsWriterProcessor implements SearchResultSetProcessor
{
    /**
     * @param SearchResultSet $resultSet
     * @return SearchResultSet
     */
    public function process(SearchResultSet $resultSet) {

        // your logic here

        return $resultSet;
    }
}
```

### I want to use the page content for a dynamic field , how can i do that?

You can use a virtual field called `__solr_content`, which holds the content of the current page.

Example:

```
plugin.tx_solr.index.queue.pages.fields {
    content_textEdgeNgramS = SOLR_CONTENT
    content_textEdgeNgramS {
        field = __solr_content
    }
}
```

## APPENDIX - DYNAMIC FIELDS

Dynamic fields allow you to add custom fields to Solr documents. That said, you never need to modify Solr's schema (which could cause problems or at least unnecessary additional work when updating the Solr extension). The following sections describe how to use dynamic fields with your Solr for TYPO3 installation. Usage of dynamic fields

You can use dynamic fields by following a special naming convention for document fields. E.g. to create a dynamic field that is a string the field name should end with `_stringS`. So if you want to create a field for storing a title you would name it `title_stringS`. We suggest you use lower camel case for the field name followed by an underscore followed by the dynamic field type "extension".

We've predefined the following dynamic fields:

	Extension	Type	Multivalue	Comment
*_stringS	String		No	
*_stringM	String		Yes	
*_stringCollatedS	string_collated		No	
*_stringCollatedM	string_collated		Yes	
*_binS	binary		No	Stored but not indexed
*_binM	binary		Yes	Stored but not indexed
*_boolS	Boolean		No	
*_boolM	Boolean		Yes	
*_intS	Integer		No	
*_intM	Integer		Yes	
*_tIntS	Integer		No	Deprecated use <code>_intS</code> removed in EXT:solr 10
*_tIntM	Integer		Yes	Deprecated use <code>_intM</code> removed in EXT:solr 10
*_longS	Long		No	
*_longM	Long		Yes	
*_tLongS	Long		No	Deprecated use <code>_longS</code> removed in EXT:solr 10
*_tLongM	Long		Yes	Deprecated use <code>_longM</code> removed in EXT:solr 10
*_floatS	Float		No	
*_floatM	Float		Yes	
*_tFloatS	Float		No	Deprecated use <code>_floatS</code> removed in EXT:solr 10
*_tFloatM	Float		Yes	Deprecated use <code>_floatM</code> removed in EXT:solr 10
*_doubleS	Double		No	
*_doubleM	Double		Yes	
*_tDoubleS	Double		No	Deprecated use <code>_doubleS</code> removed in EXT:solr 10
*_tDoubleM	Double		Yes	Deprecated use <code>_doubleS</code> removed in EXT:solr 10
*_tDouble4S	Double		No	Deprecated use <code>_double4S</code> removed in EXT:solr 10
*_tDouble4M	Double		Yes	Deprecated use <code>_double4M</code> removed in EXT:solr 10
*_dateS	Date		No	
*_dateM	Date		Yes	
*_tDateS	Date		No	Deprecated use <code>_dateS</code> removed in EXT:solr 10
*_tDateM	Date		Yes	Deprecated use <code>_dateM</code> removed in EXT:solr 10

Continued on next page

Table 12.1 – continued from previous page

Extension	Type	Multivalue	Comment
*_random	Random	No	
*_textS	Text	No	
*_textM	Text	Yes	
*_textTS	Text Tight	No	
*_textTM	Text Tight	Yes	
*_textSortS	Sortable Text	No	
*_textSortM	Sortable Text	Yes	
*_textWstS	Whitespace tokenized Text	No	
*_textWstM	Whitespace tokenized Text	Yes	
*_textEdgeNgramS	Edge Ngram (hello => hello, hell..)	No	
*_textEdgeNgramM	Edge Ngram (hello => hello, hell..)	Yes	
*_textNgramS	Ngram (hello => he,ll,lo,he,l,lo)	No	
*_textNgramM	Ngram (hello => he,ll,lo,he,l,lo)	Yes	
*_textPath	textPath	No	
*_textExactS	textExact	No	
*_textExactM	textExact	Yes	
*_textSpellS	textSpell	No	
*_textSpellM	textSpell	Yes	
*_textSpellExactS	textSpellExact	No	
*_textSpellExactM	textSpellExact	Yes	
*_phoneticS	Phonetic	No	
*_phoneticM	Phonetic	Yes	
*_point	point	No	
*_location	location	No	
*_coordinate	double		
*_locationRpt	locationRpt	No	
*_currency	currency	No	

## APPENDIX - VERSION MATRIX

**See also:**

You are on docs for EXT:solr 11.2.6 ELTS version, please refer to [Version Matrix on main release](#) to see all versions.

### 13.1 Requirements for EXT:solr\* 11.2 stack

Basic components		Funding contribution extensions				Published funding contribution extensions		Solr configuration	
TYPE	EXT:solr	EXT:tika	EXT:solr	EXT:solrconsol	EXT:solrdebug	EXT:solrfluid	EXT:solrmlt	Apache Solr	Config
10.4	11.2	10.0	10.0	10.0	10.0	10.0	10.0	9.8.1 <sup>1</sup>	ext_solr

<sup>1</sup> - recommended Apache Solr version, check version matrix in composer.json (composer info:solr-versions) for full list



## RELEASES

### 14.1 Apache Solr for TYPO3 7.0.0

We are happy to release EXT:solr 7.0.0. This release brings several smaller and some bigger changes

#### 14.1.1 New in this release

##### FLUID Templating

One and a half years ago we started to implement FLUID templating for EXT:solr. This project was initially started as the addon solrfuid. Solrfuid was only available for our partners.

With EXT:solr 7.0.0 the new templating is the default templating in EXT:solr. A lot of code was added and several old stuff was removed. Since some things are conceptional different in FLUID and you also have a lot of possibilities we also dropped some parts, that can be build with fluid itself or do not make sence to do them before rendering the result in the view.

Most of the things just work like before but in the following parts we made conceptional changes (for good reasons):

- No css or javascript will be added to the page automatically with the page renderer! Because the integrator wants to have control on that and TYPO3 allows to add this with TypoScript we propose to add these things via typoscript. EXT:solr offers a lot of example typoscript templates e.g. to add the default css or to add the javascript for a range facet.

The following typoscript settings have been removed because they can be implemented with FLUID:

##### **plugin.tx\_solr.search.faceting.facetLinkATagParams**

You can add them in your project partials. If you need it just for one facet, please overwrite the render partial with facet.partialName and render the attributes different there

##### **plugin.tx\_solr.search.faceting.[facetName].facetLinkATagParams**

You can add them in your project partials. If you need it just for one facet, please overwrite the render partial with facet.partialName and render the attributes different there

##### **plugin.tx\_solr.search.faceting.facets.[facetName].selectingSelectedFacetOptionRemovesFilter**

This can be implemented with FLUID logic. Please check the example “Search - (Example) Options with on/off toggle” that implements that (by using the partial Facets/OptionsToggle.html)

##### **plugin.tx\_solr.search.results.fieldRenderingInstructions**

Please use custom ViewHelpers or the cObject ViewHelper for that.

##### **plugin.tx\_solr.search.results.fieldProcessingInstructions**

Please use custom ViewHelpers or the cObject ViewHelper for that.

**Important:** The support of fluid templating would not have been possible without the financial support of all partners! If you want to support us with the implementation of features like this, please think about to join the EB 2017 or 2018. Special thanks also to Frans Saris and beech.it for working on solrfuid together!

- <https://github.com/TYPO3-Solr/ext-solr/pull/1308>

### Backend Modules Restructured

In EXT:solr 7.0.0 the backend modules are structured into multiple backend modules. This makes the user experience in the TYPO3 backend more consistent and allows you, to give different permissions on each module.

When you login into the backend, you now have the following modules available:

- Info: Gives information of your Solr system, index fields and search usage.
- Core Optimization: This module can be used to maintain the synonyms and stopwords in the Apache Solr server.
- Index Queue: Gives an overview on indexed records and can be used to requeue records for indexing.
- Index Administration: This module can be used for administrator tasks on your solr system (clear index, index queue or reload a core)
- <https://github.com/TYPO3-Solr/ext-solr/pull/1300>

### Add excludeValues for Facets

If you want to exclude an optionValue from the facets when they get retrieved, you can configure this now:

```
plugin.tx_solr.search.faceting.facets.colors_stringM.excludeValues = red
```

The example below will exclude the option “red” from the results when it is in the response.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1364>

### Allow to configure custom entry Template

In previous EXT:solr versions it was possible to set a custom entry templating using:

```
plugin.tx_solr.templateFiles.search = EXT:solr/Resources/Templates/PiSearch/search.  
→htm
```

This configuration could be overwritten with a text value in the flexform.

With the move to FLUID we improved this part and made it more editor friendly:

- Since the view related settings are located in the <view> section we’ve move the template configuration there as well.
- You can now set a Templatename only (e.g. MySearch) to benefit from FLUID fallbacks (while setting a full path is still supported).
- You can configure availableTemplates that can be selected by the editor in the flexform.

The following example shows, how you can load your own partials and provide different entry templates for the editor:

```
plugin.tx_solr {  
    view {  
        templateRootPaths.100 = EXT:your_config_extension/Resources/Private/  
→Templates/  
        partialRootPaths.100 = EXT:your_config_extension/Resources/Private/Partials/  
→  
        layoutRootPaths.100 = EXT:your_config_extension/Resources/Private/Layouts/  
        templateFiles {  
            results = Results  
            results.availableTemplates {  
                default {  
                    label = Default Searchresults Template  
                    file = Results  
                }  
            }  
        }  
    }  
}
```



## Doctrine Migration

As an ongoing task, we started with the migration of database queries to doctrine. Since the database is used in many parts of the extension there are still many parts open. If you want to work on that, your help is very welcome.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1259>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1265>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1270>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1271>

Add --rootpageid to CLI command

If you want or need to limit the initialization of solr connections to a special rootpage, you can now do this by adding the argument --rootpageid.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1305>

Respect Setting includeInAvailableFacets and includeInUsedFacets

This setting was not evaluated in EXT:solrfluid before and is now available also with FLUID rendering.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1340>

Respect requirements facet setting with fluid

This setting was not evaluated in EXT:solrfluid before and is now available also with the FLUID rendering.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1401>

Respect setting searchUsingSpellCheckerSuggestion with fluid

This setting was not evaluated in EXT:solrfluid before and is now available also with the FLUID rendering.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1501>

Get rid of dependency to sys\_domain record

By now EXT:solr had the dependency on an existing domain record. This can be a problem, when you domain is dynamic or you need to be able to generate it.

Now you can configure a domain by the rootPageId in the TYPO3\_CONF\_VARS, the domain record is still used, when nothing is configured here.

```
$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['sites'][###rootPageId###]['domains'] = ['mydomain.com'];
```

### Note:

There might be an approach to support this in TYPO3 Version 9 by the core and we will adopt this then.

During the implementation of this the logic to retrieve the SiteHash and get the SolrConfiguration was moved to the SiteRepository, this requires an update of the scheduler instances because the scheduler saves a serialized task. Please run the shipped migration to update scheduler tasks created with 6.1.x.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1512>

Preparations for TYPO3 9

Several things that will be removed with 9 have been changed:

- <https://github.com/TYPO3-Solr/ext-solr/pull/1443>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1452>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1462>

### 14.1.2 Bugfixes

- Enable zero-configuration use of Docker image: <https://github.com/TYPO3-Solr/ext-solr/issues/1278>
- Remove unused use statement: <https://github.com/TYPO3-Solr/ext-solr/pull/1292>
- Indexing record outside siteroot throws exception: <https://github.com/TYPO3-Solr/ext-solr/pull/1299>
- Mounted pages from outside of the page tree lead to index queue errores: <https://github.com/TYPO3-Solr/ext-solr/pull/1294>
- Ignore workspace in RootPageResolver: <https://github.com/TYPO3-Solr/ext-solr/pull/1298>
- Preserve sort order when fetching related records: <https://github.com/TYPO3-Solr/ext-solr/pull/1326>
- Fix logging of error when devlog is enabled: <https://github.com/TYPO3-Solr/ext-solr/pull/1341>
- Tracking changes in record from other siteroot is not working as expected <https://github.com/TYPO3-Solr/ext-solr/pull/1348>
- Relation handler should handle pages overlays correctly <https://github.com/TYPO3-Solr/ext-solr/pull/1400>

### 14.1.3 Removed Code

The following code has been removed since it is not used anymore:

Classes:

- ScriptViewHelper
- StyleViewHelper
- AbstractSolrBackendViewHelper
- StringUtility

Methods:

- Util::camelize
- Util::camelCaseToLowerCaseUnderscored
- Util::underscoredToUpperCamelCase
- Util::pageExists

### 14.1.4 Deprecated Code

Methods:

- Query::setQueryFieldsFromString use setQueryFields(QueryFields::fromString('foo')) with QueryFields instead, will be removed in 8.0
- Query::getQueryFieldsAsString use getQueryFields()->toString() now if needed, will be removed in 8.0
- Query::setQueryField use getQueryFields()->set() now, will be removed in 8.0
- Query::escape Use EscapeService::escape now, when needed
- Query::addReturnField use getReturnFields()->add() now, will be removed in 8.0
- Query::removeReturnField use getReturnFields()->remove() now, will be removed in 8.0
- Query::getFieldList use getReturnFields()->getValues() now, will be removed in 8.0
- Query::setFieldList use setReturnFields() now, will be removed in 8.0
- Query::escapeMarkers not needed anymore, use your own implementation when needed
- Query::setNumberOfGroups use getGrouping()->setNumberOfGroups() instead, will be removed in 8.0
- Query::getNumberOfGroups use getGrouping()->getNumberOfGroups() instead, will be removed in 8.0
- Query::addGroupField use getGrouping()->addField() instead, will be removed in 8.0

- Query::getGroupFields use getGrouping()->getFields() instead, will be removed in 8.0
- Query::addGroupSorting use getGrouping()->addSorting() instead, will be removed in 8.0
- Query::addGroupSortings use getGrouping()->getSortings() instead, will be removed in 8.0
- Query::addGroupQuery use getGrouping()->addQuery() instead, will be removed in 8.0
- Query::addGroupQueries use getGrouping()->getQueries() instead, will be removed in 8.0
- Query::setNumberOfResultsPerGroup use getGrouping()->setResultsPerGroup() instead, will be removed in 8.0
- Query::getNumberOfResultsPerGroup use getGrouping()->getResultsPerGroup() instead, will be removed in 8.0
- Query::setFacetFields use getFaceting()->setFields() instead, will be removed in 8.0
- Query::addFacetField use getFaceting()->addField() instead, will be removed in 8.0
- Query::removeFilter use getFilters()->removeByFieldName() instead, will be removed in 8.0
- Query::removeFilterByKey use getFilters()->removeByName() instead, will be removed in 8.0
- Query::removeFilterByValue use getFilters()->removeByValue() instead, will be removed in 8.0
- Query::addFilter use getFilters()->add() instead, will be removed in 8.0

#### Method Arguments:

- Query::setGrouping now expects the first argument to be a Grouping object, compatibility for the old argument (bool) will be dropped in 8.0
- Query::setHighlighting now expects the first argument to be a Highlighting object, compatibility for the old arguments (bool, int) will be dropped in 8.0
- Query::setFaceting now expects the first argument to be a Faceting object, compatibility for the old arguments (bool) will be dropped in 8.0

#### Hooks:

- \$GLOBALS['TYPO3\_CONF\_VARS']['EXTCONF']['solr']['modifySearchResponse'] has been marked as deprecated and will be dropped in 8.0 please use a SearchResultSetProcessor registered in \$GLOBALS['TYPO3\_CONF\_VARS']['EXTCONF']['solr']['afterSearch'] as replacement.
- \$GLOBALS['TYPO3\_CONF\_VARS']['EXTCONF']['solr']['processSearchResponse'] has been marked as deprecated and will be dropped in 8.0 please use a SearchResultSetProcessor registered in \$GLOBALS['TYPO3\_CONF\_VARS']['EXTCONF']['solr']['afterSearch'] as replacement.

### 14.1.5 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors for this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Andreas Lappe
- Felix Eckhofer
- Frans Saris
- Georg Ringer
- Helmut Hummel
- Jonas Ulrich
- Marco Bresch
- Markus Friedrich
- Michael Skrynski

- Rafael Kähm
- Rémy DANIEL
- Sascha Egerer
- Sebastian Hofer
- Timo Hund

Also a big thanks to our partners that have joined the EB2017 program:

- .hausformat
- AGENTUR FRONTAG AG
- amarantus - media design & conding Mario Drengner & Enrico Nemack GbR
- Amedick & Sommer Neue Medien GmbH
- Andrea Pausch
- Animate Agentur für interaktive Medien GmbH
- artig GmbH & Co. KG
- b:dreizehn GmbH
- BIBUS AG Group
- Bitmotion GmbH
- cab services ag
- Causal Sarl
- CHIARI GmbH
- Citkomm services GmbH
- clickstorm GmbH
- Connecta AG
- Creative360
- cron IT GmbH
- CYBERhouse Agentur für interaktive Kommunikation GmbH
- cyperfection GmbH
- data-graphis GmbH
- Deutsche Welthungerhilfe e.V.
- Deutscher Ärzteverlag
- Deutscher Volkshochschul-Verband
- Die Medialen GmbH
- die\_schnittsteller gmbh
- Dörfer engineering services
- E-Magineurs
- EYE Communications AG
- Fachhochschule für öffentliche Verwaltung NRW Zentralverwaltung Gelsenkirchen
- familie redlich AG
- Fork Unstable Media GmbH
- hauptsache.net GmbH

- Havas Düsseldorf GmbH
- Hirsch & Wöfl GmbH
- Hochschule Furtwangen - IMZ Online Services
- Hochschule Konstanz
- Institut der deutschen Wirtschaft Köln Medien GmbH
- ireresults gmbh
- ITK Rheinland
- itl Institut für technische Literatur AG
- jweiland.net
- Kassenärztliche Vereinigung Rheinland-Pfalz
- Kerstin Nägler Web & Social Media Beratung
- Landesinstitut für Schule und Medien Berlin-Brandenburg
- Leibniz Universität IT Services
- Libéo
- Lime Flavour GbR
- LINGNER CONSULTING NEW MEDIA GMBH
- LOUIS INTERNET
- Maximilian Walter
- MEDIA:ESSENZ
- mehrwert intermediäre kommunikation GmbH
- Mercedes-AMG GmbH
- mlm media process management GmbH
- [n@work](#) Internet Informationssysteme GmbH
- Netcreators
- netz-haut GmbH
- neuwerk interactive
- Nintendo of Europe GmbH
- Onedrop Solutions GmbH
- Open New Media GmbH
- Paints Multimedia GmbH
- pixelcreation GmbH
- plan2net
- Pluswerk AG
- polargold GmbH
- punkt.de GmbH
- Raiffeisen OnLine GmbH
- ruhmesmeile GmbH
- Rundfunk und Telekom Regulierung GmbH
- Schweizer Alpen-Club SAC

- sitegeist media solutions GmbH
- Star Finanz-Software Entwicklung und Vertriebs GmbH
- Stefan Galinski Internetdienstleistungen
- Stratis - Toulon
- Studio Mitte Digital Media GmbH
- Studio 9 GmbH
- Systime A/S
- SYZYGY Deutschland GmbH
- takomat Agentur GbR
- THE BRETTINGHAMS GmbH
- TOUMORO
- Triplesense Reply GmbH
- Typoheads GmbH
- unternehmen online GmbH & Co. KG
- Universität Bremen
- VERDURE Medienteam GmbH
- WACON Internet GmbH
- webedit AG
- Webstore GmbH
- Webtech AG
- wegewerk GmbH
- Wohnungsbau- und Verwaltungsgesellschaft mbH Greifswald
- XIMA MEDIA GmbH
- zdreicom GmbH
- zimmer7 GmbH

Thanks to everyone who helped in creating this release!

#### 14.1.6 Outlook

In the next release we want to focus on the user experience in the backend and in the frontend. As preparation we collected several tasks.

The goal of some of them (e.g. bootstrap templating, checkbox facets, filterable options partial) is to make more things possible out of the box and make the extension more user friendly:

<https://github.com/TYPO3-Solr/ext-solr/issues?q=is%3Aissue+is%3Aopen+label%3AUX>

If you have already implemented one of these (or something else), that you want to share or make available out of the box feel free to contact us!

#### 14.1.7 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

- Submit bug reports and feature requests on [GitHub](<https://github.com/TYPO3-Solr/ext-solr>)
- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)

- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

Support us in 2017 by becoming an EB partner:

<http://www.typo3-solr.com/en/contact/>

or call:

+49 (0)69 - 2475218 0

## 14.2 Apache Solr for TYPO3 8.0.0

We are happy to release EXT:solr 8.0.0. The focus of EXT:solr 8.0.0 was, to improve the user experience in the frontend and backend.

### 14.2.1 New in this release

In the following paragraphs we want to summarize the new features that will be shipped with EXT:solr 8.0.0

New suggest

We've replaced the old jQuery UI based autosuggest with a new suggest (<https://github.com/devbridge/jQuery-Autocomplete>). The advanced suggest can not only show the suggestions, it can also show a configurable amount of top search results.

When the user clicks on the result, he can directly jump to the result page without opening the search results page.

Thanks:

- Frans Saris and <http://www.beech.it> for sharing the codebase of the initial patch!

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1638>

JSON Faceting for options facets

Apache Solr offers a JSON API for faceting since several versions. Starting with the options facet we've added the support to use this JSON faceting API in EXT:solr.

The support of the JSON API, in general, allows us to build new features on top of that API, that was impossible before. With the first implementation we've added the following features:

By now an option was simply the value and the count, that reflects the number of documents that belong to that option. At EXT:solr 8.0.0 we've added a TypoScript option that is called "metrics", that allows us to collect and show several metrics from documents that belong to a facet option. Examples of metrics are e.g "sum of downloads", "average price",... These metrics will be available in Option model in the FLUID template and can also be used to sort the facet options.

The following example shows an configured options facet with a configured metric:

```
plugin.tx_solr.search.faceting.facets.type.metrics {
    newest = max(created)
    oldest = min(created)
}
```

In the FLUID template you could use the following code in the facet partial to render those metrics:

```
<span>
    newest: {option.metrics.newest -> f:format.date(format: 'Y-m-d H:i:s')}
</span>
<span>
```

```
oldest: {option.metrics.oldest -> f:format.date(format: 'Y-m-d H:i:s')}
</span>
```

Thanks:

- Thanks to Jens Jacobsen and UEBERBIT for sponsoring Jens work on that feature at our code sprint.

Since we replaced the whole internal communication from EXT:solr to Apache Solr when options facets are used we are very happy to get your feedback and bug reports when you use the options facets with EXT:solr

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1764>

Group facet options by prefix

When you have option facets with a lot of options, it would be nice to group those options by a prefix. An example is that you group all options by the starting letter to organize them in tabs:

With EXT:solr 8 we ship the following components that allow grouping your facet options to arrange them as you need them in your template:

- LabelFilterViewHelper: Can be used to filter options based on a prefix of the label.
- LabelPrefixesViewHelper: Can be used to access all available prefixes of the facet options.
- TypoScript example template “(Example) Options grouped by prefix” that configures a grouped facet on the author field

Thanks: This feature was sponsored by <https://www.linnearad.no/>

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1717>

Filterable options facet

In the previous section, the facets get grouped by prefix to organize a large number of options. Another way that you also often see on the web is to allow to filter the options with an additional input box above the facet.

The implementation of that feature is possible just with a partial and a few JavaScript components. To simplify the integration of that feature in a project we ship

- Example FLUID partial that uses the filter for options
- Example JavaScript that implements the filter functionality
- Example TypoScript “Search - (Example) Options filterable by option value” that uses the partials and javascript for a facet

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1741>

Default partials with bootstrap.css

The old templating was created with custom CSS that was shipped with the extension. Since we want to decrease the effort that is required to create a mobile search and many integrators use bootstrap.css we decided to ship bootstrap templates by default. If you want to use another framework or your own custom CSS you are still able to do that with custom templates.

Nevertheless, the mobile search in a TYPO3 introduction installation with bootstrap is much better than before and your effort to adopt it should be reduced.

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1738>

Performance improvements

In EXT:solr 7.x and below a ping request was done before each search. In EXT:solr 8.0.0 we just catch a failed search and handle the unavailability. This saves up to 30% time because we just need one HTTP request to Apache Solr instead of 2.

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1660>

## Improved index inspector

In the previous versions, we've introduced own backend modules that can also be used by regular TYPO3 users to perform several tasks. With EXT:solr 8.0.0 the index inspector will be moved from the common info module to our info module:

Besides the move, we also added the functionality to ReQueue a single document from the index inspector when you have permissions on the index queue module.

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1763>

## Use TYPO3 Guzzle for page index requests

The indexing of pages is now done with the shipped Guzzle client in TYPO3.

Thanks: Thanks to Benni Mack from b13 who has implemented that feature <http://www.b13.de/>

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1837>

## SOLR\_CLASSIFICATION cObject

When you index a lot of documents you might want to create facets based on patterns that occur in the content.

The cObject SOLR\_CLASSIFICATION allows you to do a lightweight classification based on regex patterns that you configure in the index configuration.

The following example shows how SOLR\_CLASSIFICATION can be used to map patterns on classes that are indexed into a Solr field that could be used for faceting:

```
plugin.tx_solr.index.queue.pages.businessarea_stringM = SOLR_CLASSIFICATION
plugin.tx_solr.index.queue.pages.businessarea_stringM {
    field = __solr_content
    classes {
        automotive {
            patterns = car, jeep, SUV
            class = automotive
        }
        pharma {
            patterns = pharma, doc, medicine
            class = pharma
        }
    }
}
```

With the configuration above Solr documents get the value “automotive” assigned in the Solr field “businessarea\_stringM” when the content contains the term “car”, “jeep” or “SUV”.

Thanks: Thanks to <http://www.bibus.ch> who sponsored the implementation of this feature.

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1723>

## Phrase support (phrase, bigram, trigram)

With `plugin.tx_solr.search.query.(phrase/bigramPhrase/trigramPhrase).fields` you can control what is passed to Solr with the `ps`, `ps2` and `ps3` value.

With these phrase fields, you can boost documents where phrases occur in close proximity. This can be very handy when you want to tune your search in terms of relevancy.

Related links:

- [https://lucene.apache.org/solr/guide/66/the-dismax-query-parser.html#TheDisMaxQueryParser-ThepfPhraseFields\\_Parameter](https://lucene.apache.org/solr/guide/66/the-dismax-query-parser.html#TheDisMaxQueryParser-ThepfPhraseFields_Parameter)

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1735>

Tie parameter support

With `plugin.tx_solr.search.query.tieParameter` you can now configure the tie value that is passed to Apache Solr.

This value allows you to configure the impact of low scoring fields to the overall score. 0.0 means, that only high score fields will matter, 0.99 means that all fields have the same impact

Related links:

- <https://solr.pl/en/2012/02/06/what-can-we-use-dismax-tie-parameter-for/>
- [https://lucene.apache.org/solr/guide/66/the-dismax-query-parser.html#TheDisMaxQueryParser-TheTieTieBreaker\\_Parameter](https://lucene.apache.org/solr/guide/66/the-dismax-query-parser.html#TheDisMaxQueryParser-TheTieTieBreaker_Parameter)

Thanks: Thanks to Marcus Schwemer and in2code that sponsored and shared that feature.

Related pull request: <https://github.com/TYPO3-Solr/ext-solr/pull/1690>

Doctrine ready

TYPO3 8 introduced Doctrine DBAL for database queries and the old API will be removed in TYPO3 9. Since we've used a lot of repositories with custom SQL queries, we had to rewrite a lot of queries.

In EXT:solr we've used the chance to restructure the SQL related code and move them to repositories whenever this was possible.

With EXT:solr 8 every usage of the old database API is removed and we are prepared in that way to be ready for TYPO3 9.

Fluent API for Queries with the QueryBuilder

Many parts of the code of EXT:solr deal with queries for Apache Solr that's no surprise :). The corresponding parts in the code especially the Query class had grown over time and reached a huge complexity.

This has several drawbacks:

- It is hard to integrate new features (e.g the tiebreaker or bigram features)
- TYPO3 specific logic and common Apache Solr logic is mixed and makes it hard to switch to frameworks like e.g. Solarium
- The Query class does multiple things: Build the query, initialize the query from the configuration,... This could be split into multiple components.

To get better in that regards our goal is to split the Query into:

- Query: Aggregate that is responsible to build the Solr query string based on the options
- QueryBuilder: Builder class that is responsible to build an initialized Query object e.g. based on TypoScript configuration and user input.

With the current state the QueryBuilder does the following to build a Query from the user input:

```
$query = $queryBuilder->newSearchQuery($rawQuery)
->useResultsPerPage($resultsPerPage)
->useReturnFieldsFromTypoScript()
->useQueryFieldsFromTypoScript()
->useInitialQueryFromTypoScript()
->useFiltersFromTypoScript()
->useFacetingFromTypoScript()
->useVariantsFromTypoScript()
->useGroupingFromTypoScript()
->useHighlightingFromTypoScript()
->usePhraseFieldsFromTypoScript()
->useBigramPhraseFieldsFromTypoScript()
->useTrigramPhraseFieldsFromTypoScript()
->getQuery();
```

Finally, this allows us to:

- Integrate new features faster
- Allow devs to compose own queries that use or ignore several aspects of EXT:solr
- Simplify the switch or integration of a generic Solr API that is independent of TYPO3 (e.g. Solarium)

On the way to TYPO3 9

With EXT:solr 8.0.0 we will not officially support TYPO3 9 since it is not an LTS release! Nevertheless, we want to stay close to the TYPO3 core and allow the usage in 9 already.

By now we mainly fix Doctrine and Composer related issues and support the dropped “pageslanguageoverlay” table.

So to sum up... EXT:solr 8.0.0 will mainly support TYPO3 8 LTS and we will support TYPO3 9.x as good as we can without losing the backward compatibility to TYPO3 8 LTS.

### 14.2.2 Bugfixes

- Can not set the facet sorting to count when global sorting is set to index: <https://github.com/TYPO3-Solr/ext-solr/pull/1667>
- Filter with Flexform in backend does not work when value contains whitespaces: <https://github.com/TYPO3-Solr/ext-solr/issues/1742>
- SOLR\_RELATION does not recognize sys\_categories for translated pages: <https://github.com/TYPO3-Solr/ext-solr/issues/1812>
- Allow to use EXT:solr with sql strict mode: <https://github.com/TYPO3-Solr/ext-solr/issues/1785>
- Missing array keys in facet options after manual sorting: <https://github.com/TYPO3-Solr/ext-solr/pull/1712>
- partialName is missing in TypoScript reference: <https://github.com/TYPO3-Solr/ext-solr/pull/1730>

### 14.2.3 Removed Code

#### Query Refactoring

In the long run we want to be able to use other PHP frameworks for Apache Solr e.g. solarium(<http://www.solarium-project.org/>). To make this possible, we need to split the pure Solr query related logic from the TYPO3Solr specific query logic (e.g. accessFilter,...). To get a step closer into this direction, we've extracted the logic that is required to build a TYPO3 specific Solr query into the QueryBuilder. The pure Solr related query logic remains in the Query class.

Impact:

- Whenever you create or modify queries you should use the QueryBuilder class for that. In one of the next releases we will support to create solarium queries with this QueryBuilder.

Beside the query refactoring, that required to remove and change several methods, the following code has been removed:

Hooks:

- `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['modifySearchResponse']` has been marked as deprecated and will be dropped in 8.0 please use a `SearchResultSetProcessor` registered in `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['afterSearch']` as replacement.
- `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['processSearchResponse']` has been marked as deprecated and will be dropped in 8.0 please use a `SearchResultSetProcessor` registered in `$GLOBALS['TYPO3_CONF_VARS']['EXTCONF']['solr']['afterSearch']` as replacement.

### 14.2.4 Deprecated Code

The following methods have been marked as deprecated and will be removed in EXT:solr 9.0.0

- `ApacheSolrForTypo3SolrSearch::getResultDocumentsRaw` - Use the `SearchResultsSet::getSearchResults` now
- `ApacheSolrForTypo3SolrSearch::getResultDocumentsEscaped` - Use the `SearchResultsSet::getSearchResults` now
- `ApacheSolrForTypo3SolrSearch::getFacetCounts` - Use the `SearchResultSet::getFacets` now
- `ApacheSolrForTypo3SolrSearch::getFacetFieldOptions` - Use the `SearchResultSet::getFacets` now
- `ApacheSolrForTypo3SolrSearch::getFacetQueryOptions` - Use the `SearchResultSet::getFacets` now
- `ApacheSolrForTypo3SolrSearch::getFacetRangeOptions` - Use the `SearchResultSet::getFacets` now
- `ApacheSolrForTypo3SolrSearch::getSpellcheckingSuggestions` - Use `SearchResultSet::getSpellcheckingSuggestions`
- `ApacheSolrForTypo3SolrQuery` is deprecated, use `ApacheSolrForTypo3SolrDomainSearchQueryQuery` now
- `ApacheSolrForTypo3SolrSuggestQuery` is deprecated, use `ApacheSolrForTypo3SolrDomainSearchQuerySuggestQuery` now

### 14.2.5 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors for this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Andreas Lappe
- Andri Steiner
- Benni Mack
- Daniel Diesenreither
- Daniel Mann
- Daniel Ruf
- Georg Ringer
- Hannes Lau
- Jeffrey Nellissen
- Jens Jacobsen
- Marco Bresch
- Marcus Schwemer
- Markus Friedrich
- Markus Kobligk
- Markus Sommer
- Nicole Cordes
- Patrick Schriener
- 16. Golmann
- Rafael Kähm
- Sascha Egerer
- Simon Schmidt
- Thomas Löffler
- Timo Hund

- Tomas Norre Mikkelsen

Also a big thanks to our partners that have joined the EB2018 program:

- Albervanderveen
- Amedick & Sommer
- AUSY SA
- bgm Websolutions GmbH
- Citkomm services GmbH
- Consulting Piezunka und Schamoni - Information Technologies GmbH
- Cows Online GmbH
- food media Frank Wörner
- FTI Touristik GmbH
- Hirsch & Wölfl GmbH
- Hochschule Furtwangen
- JUNGMUT Communications GmbH
- Kreis Coesfeld
- LOUIS INTERNET GmbH
- L.N. Schaffrath DigitalMedien GmbH
- Mercedes AMG GmbH
- Petz & Co
- Pluswerk AG
- ressourcenmangel an der panke GmbH
- Site'nGo
- Studio B12 GmbH
- systime
- Talleux & Zöllner GbR
- TOUMORO
- TWT Interactive GmbH

Special thanks to our premium EB 2018 partners:

- b13 <http://www.b13.de/>
- dkd <http://www.dkd.de/>
- jweiland.net <http://www.jweiland.net/>

Thanks to everyone who helped in creating this release!

## 14.2.6 Outlook

In the next release we want to focus on the move to solarium and the support of the latest Apache Solr version.

### 14.2.7 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

- Submit bug reports and feature requests on [GitHub](<https://github.com/TYPO3-Solr/ext-solr>)
- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

Support us in 2017 by becoming an EB partner:

<http://www.typo3-solr.com/en/contact/>

or call:

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## 14.3 Apache Solr for TYPO3 8.1.0

We are happy to release EXT:solr 8.1.0. The focus of EXT:solr 8.1.0 was, to improve the API for the new EB addon's "solrconsole" and "solrdebugtools".

### 14.3.1 New in this release

Groups should be respected in suggest as well

When solrfluidgrouping is installed the groups are also respected for the top results in the suggest.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1882>

Display plugin name in page module

This patch extends the hook PageModuleSummary displaying information about the plugins flexform settings in the page module. Now the plugin name will be displayed and linked to the edit form, similar to the default behavior.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1897>

TypoScriptService moved from Extbase to Core

The TypoScriptService was moved from extbase to the core and we now use the service in the TYPO3 core.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1910>

Improvements for solrconsole

The implementation of solrconsole required several API changes for the implementation of the commands. These changes have been added with the following pull requests:

- <https://github.com/TYPO3-Solr/ext-solr/pull/1919>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1921>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1936>

Use Apache Solr 6.6.3

We've updated shipped Apache Solr version to 6.6.3

- <https://github.com/TYPO3-Solr/ext-solr/pull/1938>

## Documentation improvements

Several issues have been fixed in the documentation to keep it up-to-date.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1935>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1951>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1961>
- <https://github.com/TYPO3-Solr/ext-solr/pull/2014>

## Add datetime fields for new configuration

For the example index configuration for EXT:news, the datetime fields have been added.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1944>

## Anonymize ip addresses by default

Since several versions it is possible to anonymize the ip-address in the statistics. This is now enabled by default.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1962>

## Remove setting search.spellchecking.wrap

This setting is not used anymore. It was replaced by a label in fluid in version 7.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1988>

## Allow configuring additional persistent arguments in the search

Now you can configure custom url arguments in the search that are transported from page to page.

Use the following setting to configure them:

```
plugin.tx_solr.search.additionalPersistentArgumentNames = foo, bar
```

- <https://github.com/TYPO3-Solr/ext-solr/pull/1985>

## Set mm.autoRelax to true by default

When terms get removed because they are stopwords this might have an unwanted impact when the mm condition is evaluated. Setting mm.autoRelax to true fixes this.

- <https://github.com/TYPO3-Solr/ext-solr/pull/2009>

See also:

- <https://issues.apache.org/jira/browse/SOLR-3085>

## Dispatch signals in search controller actions

This patch add's signals to the SearchController that allow passing custom arguments to the search view's.

- <https://github.com/TYPO3-Solr/ext-solr/pull/1908>

## Optimizations on suggest

With the suggest there where several issues:

- The type could not be passed before, now you can pass the type to the SearchFormViewHelper as “suggest-PageType” argument.
- The filters have been passed as global url arguments “filter” as json encoded array, what was hard to debug and inconsistent to the other parameters. We changed the parameter to the name “additionalFilters” and each filter is passed as an array item.

**Impact:** If you just use the default ViewHelpers and templates you need to change nothing. When you add custom filters to the suggest you now need to pass each filter as an array item of the argument “additionalFilters”

- <https://github.com/TYPO3-Solr/ext-solr/pull/2026>

### TYPO3 9 compatibility

With 8.1.0 we do **not** officially support TYPO3 9. You can install it on TYPO3 9.3.99 for development and we tried to fix the most important issues during the development but there are already a few known issues:

<https://github.com/TYPO3-Solr/ext-solr/issues?q=is%3Aissue+is%3Aopen+label%3A9LTS>

The following pull requests have already been merged in order to optimize the TYPO3 9 compatibility:

- <https://github.com/TYPO3-Solr/ext-solr/pull/1954>
- <https://github.com/TYPO3-Solr/ext-solr/pull/2017>
- <https://github.com/TYPO3-Solr/ext-solr/pull/2020>

### 14.3.2 Bugfixes

- <https://github.com/TYPO3-Solr/ext-solr/pull/1876> sortBy is not applied
- <https://github.com/TYPO3-Solr/ext-solr/pull/1875> Ensure AjaxController returns a response
- <https://github.com/TYPO3-Solr/ext-solr/pull/1893> Default value for \$resultsPerPage should be 10
- <https://github.com/TYPO3-Solr/ext-solr/pull/1859> Add initializeTsfe to cacheId for configurationObject-Cache
- <https://github.com/TYPO3-Solr/ext-solr/pull/1895> Prevent CURLE\_BAD\_CONTENT\_ENCODING
- <https://github.com/TYPO3-Solr/ext-solr/pull/1904> SearchRequest::getHighestGroupPage should return 1 even when group was passed
- <https://github.com/TYPO3-Solr/ext-solr/pull/1888> Show suggests box next to query input field
- <https://github.com/TYPO3-Solr/ext-solr/pull/1907> Duplicate id attribute solr-pagination
- <https://github.com/TYPO3-Solr/ext-solr/pull/1926> Use correct property to show searched keywords
- <https://github.com/TYPO3-Solr/ext-solr/pull/1963> Change type of fileSize to long
- <https://github.com/TYPO3-Solr/ext-solr/pull/1965> Broken HierarchyFacet by nesting level 10+
- <https://github.com/TYPO3-Solr/ext-solr/pull/1981> Invalid argument \$configurationName passed to Queue::updateItem
- <https://github.com/TYPO3-Solr/ext-solr/pull/1992> Use andWhere
- <https://github.com/TYPO3-Solr/ext-solr/pull/1995> Fixes warnings in the SearchRequest
- <https://github.com/TYPO3-Solr/ext-solr/pull/2012> No score analysis shown
- <https://github.com/TYPO3-Solr/ext-solr/pull/2024> Download of stopwords and synonyms not working

### 14.3.3 Deprecated Code

The following methods have been marked as deprecated and will be removed in EXT:solr 9.0.0:

- SearchResultSetService::getHasSearched() please use SearchResultSet::getHasSearched along with that the global template variable “hasSearched” will be removed with 9.0.0 as well.
- Search::getHasSearched() please use SearchResultSet::getHasSearched instead along with that the global template variable “hasSearched” will be removed with 9.0.0 as well.
- Util::isLocalizedRecord() please use TCAService::isLocalizedRecord instead
- Queue::initialize() please use Queue::initializeBySiteAndIndexConfiguration instead
- Queue::initializeIndexingConfigurations() please use Queue::initializeBySiteAndIndexConfiguration instead

- `SortingHelper::getSortFields()` please use the `SearchResultSet` to get the parsed sorting
- `SortingHelper::getSortOptions()` please use the `SearchResultSet` to get the parsed sorting

#### 14.3.4 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Andreas Lappe
- Benni Mack
- Florian Schöppe
- Frans Saris
- Jens Jacobsen
- Marc Bastian Heinrichs
- Markus Friedrich
- Michael Telgkamp
- Olivier Dobberkau
- Rafael Kähm
- Rémy DANIEL
- Thomas Löffler
- Timo Hund
- Thomas Hohn

Also a big thanks to our partners that have joined the EB2018 program:

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- Albervanderveen
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- AlrweNWR Internet BV
- Amedick & Sommer
- AUSY SA
- Bibus AG
- Bitmotion GmbH
- bgm Websolutions GmbH
- bplud interactive GmbH
- Centre de gestion de la Fonction Publique Territoriale du Nord (Siège)
- Citkomm services GmbH
- Consulting Piezunka und Schamoni - Information Technologies GmbH
- Cobytes GmbH
- Cows Online GmbH
- creativ clicks GmbH
- DACHCOM.DIGITAL AG
- Deutsches Literaturarchiv Marbach

- food media Frank Wörner
- Fachhochschule für öffentliche Verwaltung NRW
- FTI Touristik GmbH
- GAYA - La Nouvelle Agence
- Hirsch & Wölfl GmbH
- Hochschule Furtwangen
- ijuice Agentur GmbH
- Image Transfer GmbH
- JUNGMUT Communications GmbH
- Kreis Coesfeld
- LINGNER CONSULTING NEW MEDIA GMBH
- LOUIS INTERNET GmbH
- L.N. Schaffrath DigitalMedien GmbH
- MEDIA::ESSENZ
- Mehr Demokratie e.V.
- mehrwert intermediale kommunikation GmbH
- Mercedes AMG GmbH
- Petz & Co
- pietzpluswild GmbH
- pixelcreation GmbH
- plan.net
- Pluswerk AG
- Pottkinder GmbH
- PROVITEX GmbH
- Publicis Pixelpark
- punkt.de GmbH
- PROFILE MEDIA GmbH
- Q3i GmbH & Co. KG
- ressourcenmangel an der panke GmbH
- Roza Sancken
- Site'nGo
- SIWA Online GmbH
- snowflake productions gmbh
- Studio B12 GmbH
- systime
- SYZYGY Deutschland GmbH
- Talleux & Zöllner GbR
- TOUMORO
- THE BRETTINGHAMS GmbH

- TWT Interactive GmbH
- T-Systems Multimedia Solutions GmbH
- Typoheads GmbH
- Q3i GmbH
- Ueberbit GmbH
- zdreicon GmbH
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Special thanks to our premium EB 2018 partners:

- b13 <http://www.b13.de/>
- dkd <http://www.dkd.de/>
- Image Transfer GmbH <https://www.image-transfer.de/>
- jweiland.net <http://www.jweiland.net/>
- Sitegeist <http://www.sitegeist.de/>

Thanks to everyone who helped in creating this release!

#### 14.3.5 Outlook

In the next release, we want to focus on the move to solarium and the support of the latest Apache Solr version.

#### 14.3.6 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

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- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

Support us in 2018 by becoming an EB partner:

<http://www.typo3-solr.com/en/contact/>

or call:

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### 14.4 Apache Solr for TYPO3 9.0.0

We are happy to release EXT:solr 9.0.0. The focus of EXT:solr 9.0.0 was, to support the latest version of Apache Solr (7.6.0) and to drop the usage of the solrphpclient and use the solarium php API instead.

**Important:** This version is installable with TYPO3 9 LTS, but does **not** support all features of TYPO3 9 yet. Especially the site handling needs further development in EXT:solr to fully support it with TYPO3 9 LTS. Beside the open tasks in EXT:solr there are also parts left in the TYPO3 core (e.g. when using language fallbacks). In the next release of EXT:solr we want to improve the integration with the site management in TYPO3. Since the development budget is limited at one side and we have other project requests at the other side we could spend less time on the development of EXT:solr by the end of the year. If you want to support us please consider to sponsor us in 2019.

### 14.4.1 New in this release

#### Support of Apache Solr 7.6

EXT:solr 9.0.0 ships a ready to use docker container with Apache Solr 7.6. This makes new features of Apache Solr available to EXT:solr.

Replaced solrphpclient with solarium php api

For the communication between EXT:solr we've used the solrphpclient library. This library was not maintained anymore and had several custom modifications. Therefore we made the decision to move to the solarium php api.

This brings us the following advantages:

- Use a common, robust, maintained library
- Join the forces with other PHP projects to improve solarium and benefit from that

The migration to solarium required several changes in EXT:solr and all add-on's and we will provide compatibility releases for them as well.

With the move to solarium we donated some parts to the solarium API (e.g. the solr core handling). This allows us to remove some redundant logic in EXT:solr in the future.

Thanks:

- Thanks to the whole solarium team (<https://github.com/orgs/solariumphp/people>) and Markus Kalkbrenner for the work on solarium and the support during the integration into EXT:solr

Pull requests and Links:

- <https://github.com/TYPO3-Solr/ext-solr/pull/2202>
- <https://github.com/TYPO3-Solr/ext-solr/pull/2103>
- <https://github.com/TYPO3-Solr/ext-solr/pull/2070>
- <https://github.com/solariumphp/solarium/pull/625>

Outlook:

By now we use the Queries and HttpClient of solarium, but not the domain classes because this requires additional changes in EXT:solr and solarium.

In the future we want to get rid of redundant code and use the API where we can and it makes sense and support solarium with the features that we need for EXT:solr.

TYPO3 9 compatibility

The current release is installable and useable with TYPO3 9 LTS **but not all features** are supported.

Currently it is supported to:

- Use EXT:solr with sites that do have a domain record or domain configuration from EXT:solr

The following parts require additional work and are not supported:

- SiteHandling
- Extensionscanner proofed

Since a backward compatibility to TYPO3 8.7 LTS make it harder to support the previous mentioned topics. We will drop the support for TYPO3 8 LTS in the next version and improve the support of those TYPO3 9 LTS features.

Nevertheless a lot of work was already done for the basic support of TYPO3 9 LTS in the following pull requests:

- <https://github.com/TYPO3-Solr/ext-solr/pull/2169>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1954>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1799>

- <https://github.com/TYPO3-Solr/ext-solr/pull/1796>
- <https://github.com/TYPO3-Solr/ext-solr/pull/1774>

Allow open query in DateRangeFacet

This patch allows to create data range facets with an open beginning or open end.

- <https://github.com/TYPO3-Solr/ext-solr/pull/2038>

Support to differ between read and write connections

By now each site had one solr connection for reading and writing. In most of the cases this good enough when you want to index and search in the same core.

Some setups require a more flexible approach:

- E.g. when you want to clean a core and re-index that data your index is not complete for some time on the live site
- When you want to do a master/slave setup for performance reasons(e.g. by using a slave node on the web server) this was not possible by now

With a separation of read and write connections this is now possible. With these building blocks you could e.g.

- Index into a shadow core (that is the write core) and swap read and write core when your re-index is done
- Install a slave server on your frontend server and index into a dedicated master node that act's as a solr master server

The new setup can be configured like that:

```
plugin.tx_solr.solr {
    read {
        scheme = https
        host    = 127.0.0.1
        port    = 8983
        path    = /solr/core_en/
    }
    write < .read
    write {
        port    = 8984
    }
}
```

For compatibility reasons EXT:solr is falling back to `plugin.tx_solr.solr.*`` when nothing is configured here:

Important: When you update from EXT:solr 8.1.0 you need to re-initialize your EXT:solr connections.

- <https://github.com/TYPO3-Solr/ext-solr/pull/2134>

More flexible facet uri ViewHelpers with optional facet object

You could create now a facet item link (add, set, remove) somewhere else in the results view where no facet object is available.

Beside

`{s:uri.facet.setFacetItem(facet: facet, facetItem: option)}` you could create a set link now with this vh arguments:

```
{s:uri.facet.setFacetItem(facetName: 'type', facetItemValue: 'pages',
resultSet: resultSet)}
```

Thanks to Marc Bastian Heinrichs for creating a patch for that.

- <https://github.com/TYPO3-Solr/ext-solr/pull/2194>

Allow to configure additionalExcludeTags for option facets

When you want to exclude facets from the counts of another facets, Apache Solr uses tags and excludeTags to realize that.

With the setting `additionalExcludeTags` you can add custom exclude tags for a facet and `addFieldAsTag` allows you, to force the creation of a tag for a certain facet.

Thanks to Marc Bastian Heinrichs for creating a patch for that and to in2code for paying for the finalization and documentation.

- <https://github.com/TYPO3-Solr/ext-solr/issues/2195>

#### 14.4.2 Bugfixes

- <https://github.com/TYPO3-Solr/ext-solr/pull/2048> Fixes a warning in the TranslateViewHelper
- <https://github.com/TYPO3-Solr/ext-solr/pull/2052> Use copy instead of reference in the TypoScript template
- <https://github.com/TYPO3-Solr/ext-solr/pull/2053> Unify multiple whitespaces to a single whitespace
- <https://github.com/TYPO3-Solr/ext-solr/pull/2245> KeepAllFacetsOnSelection is not evaluated when KeepAllOptionsOnSelection is used

#### 14.4.3 Migration from EXT:solr 8.1.0 to EXT:solr 9.0.0

- We ship Apache Solr 7.5.0, you need to install that Version with our configSet.
- The argument “hasSearched” was removed from the searchAction and is no longer passed. You can now retrieve this information by calling “SearchResultSet::getHasSearch” or “{resultSet.hasSearched}” in the FLUID template. When you access this argument in your FLUID Template, you need to change that as well.
- EXT:solr 9 differs between read and write connections now. As fallback the old configuration is still supported and used for reading and writing. Nevertheless you need to re-initialize the solr connections that the data in the registry is rewritten. If you want to make use of the new configuration you can configure the connections like that:

```
plugin.tx_solr.solr {
    read {
        scheme = https
        host   = 127.0.0.1
        port   = 8983
        path   = /solr/core_en/
    }
    write < .read
    write {
        port   = 8984
    }
}
```

#### 14.4.4 Removed Code

The following code parts have been removed as announced in previous versions of EXT:solr:

- SearchResultSetService::getHasSearched Please use SearchResultSet::getHasSearched now
- SortingHelper::getSortFields
- SortingHelper::getSortOptions
- Queue::initialize
- Queue::initializeIndexingConfigurations
- Search::hasSearched
- Search::getResultDocumentsRaw

- Search::getResultDocumentsEscaped
- Search::getFacetCounts
- Search::getFacetFieldOptions
- Search::getFacetQueryOptions
- Search::getFacetRangeOptions
- Search::getSpellcheckingSuggestions
- Util::isLocalizedRecord

#### 14.4.5 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Aljoscha Weber
- Benni Mack
- Felix Nagel
- Florian Wessels
- Helmut Hummel
- Jens Jacobsen
- Marc Bastian Heinrichs
- Patrick Gaumont
- Rafael Kähm
- Sasche Egerer
- Thomas Hohn
- Timo Hund

Also a big thanks to our partners that have joined the EB2019 program:

- Amedick & Sommer Neue Medien GmbH
- BIBUS AG Group
- Bitmotion GmbH
- CS2 AG
- Gernot Leitgab
- Getdesigned GmbH
- Hirsch & Wölfl GmbH
- ITK Rheinland
- Kassenärztliche Vereinigung Bayerns (KZVB)
- TOUMORO
- Ueberbit GmbH
- XIMA MEDIA GmbH
- b13 GmbH
- bgm business websolutions GmbH & Co KG
- datamints GmbH

- medien.de mde GmbH
- mehrwert intermediale kommunikation GmbH
- mellowmessage GmbH
- plan2net GmbH
- punkt.de GmbH

Special thanks to our premium EB 2019 partners:

- jweiland.net
- sitegeist media solutions GmbH

In addition i want to thank Markus Kalkbrenner and the whole solarium team for the support.

Thanks to everyone who helped in creating this release!

#### 14.4.6 Outlook

In the next release we will drop the support of TYPO3 8 and focus on the integration into TYPO39. Depending on the funding we would like to support the integration into the TYPO3 site management and want to allow to configure you Solr site with the TYPO3 site management module.

With the move to the solarium php api, we take the first step of the integration. In the next releases we want to use more parts of the solarium API and also contribute to that API to share the improvements with other PHP projects.

#### 14.4.7 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

- Submit bug reports and feature requests on [GitHub](<https://github.com/TYPO3-Solr/ext-solr>)
- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

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<http://www.typo3-solr.com/en/contact/>

or call:

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### 14.5 Apache Solr for TYPO3 10.0.0

We are happy to release EXT:solr 10.0.0. The focus of EXT:solr 10.0.0 was, to support the **site handling** that was introduced in TYPO3 9 LTS .

**Important:** This version is installable with TYPO3 9 LTS only.

Since the development budget is limited at one side and we have other project requests at the other side we could spend less time on the development of EXT:solr. If you want to support us please consider to sponsor us.

#### 14.5.1 New in this release

TYPO3 9 LTS site handling support

The major new feature of EXT:solr 10 is the support of the TYPO3 site handling. You can now configure the Apache Solr connections along with your TYPO3 site. To get a typical solr site running you now need only a few settings and can use the site handling user interface for that.

## Apache Solr 8.2 support

EXT:solr 10 ships Apache Solr 8.2.

**Note:** The data volume of the Apache Solr Docker container was changed from `~/opt/solr/server/solr/data` to `~/var/solr/data/data` this might require changes in your infrastructure configuration.

## Extensionscanner cleanup

Most (not all) of the extension scanner violations have been fixed. We hope to get the extension scanner violations cleaned in the next releases.

## Drop TYPO3 8 compatibility

To simplify the development we've dropped the compatibility for TYPO3 8 LTS. If you need to use TYPO3 8 please use the 9.0.x branch.

## Add default field for image and price

To allow external applications to index common information for product's we've added a field for price and image. Along with that we've changed the suggest to render the content of the "image" field instead of "previewImage\_stringS", this might require changes in your index configuration.

## 14.5.2 Migration from EXT:solr 9 to EXT:solr 10

### Important things on sites with activated Site Handling

By default EXT:solr 10 expects the configuration of solr connections and cores in the site handling module, along with your TYPO3 site. The configuration of the solr connections with your site are available immediately, so now initialization of connections is required anymore.

The old fashioned setup (domain records and solr connections in TypoScript) are now the *legacy mode*. If you want or need to use that still, you can enable the legacy mode, with your extension configuration by setting `allowLegacySiteMode = 1`.

The following things will become standard, and should be preferred and activated/configured as close as possible and in some cases immediately, otherwise the things will not work or break the whole setup:

### TypoScript

`plugin.tx_solr.solr`

This TypoScript configurations for Constants and for Setup are at least partially obsolete and are ignored on Site Handling activated sites. All Apache Solr connections must be stored in Site Handling "config.yaml" file for each language.

`config.absRefPrefix`

The "`config.absRefPrefix`" is **obsolete** and must be replaced with Site Handlings "`base`" or "`baseVariants`" settings.

### Limitations of the site UI and yaml configuration

*Important:* The goal of the configuration with your TYPO3 site and the site module UI was to simplify the setup, especially for new users. Therefore, not all options are still possible as before, but the most of them are still possible by editing the yaml file.

There are the following known and wanted limitations:

- It is **not** possible to configure a username and a password for the solr server with the UI. You still have the possibility to add that configuration in the yaml file, in that case make sure that this file is not readable from the web!. Another approach is to configure the usage from the environment variables. To configure a username the setting `solr_username_read` or `solr_password_read` can be used in the yaml file.

- It is **not** possible to configure a different solr hostname with the UI. If you need that you can still configured that in the yaml file, by using the fallback mechanism.

The fallback mechanism work like that:

Each setting has the following structure `solr_{$setting}_{$scope}`. The scope can be read or write. Every setting can be overwritten for the scope write, if nothing is configured it will fallback to the read setting. Every setting can be defined on the language level, if it is not configured on the language level it fallsback to the global setting.`

Example:

```
base: 'http://solr-ddev-site.ddev.site/'
baseVariants: { }
errorHandling: { }
languages:
-
  title: English
  enabled: true
  base: /
  typo3Language: default
  locale: en_US.UTF-8
  iso-639-1: en
  navigationTitle: ''
  hreflang: en-US
  direction: ''
  flag: global
  solr_host_read: solr_node_1
  solr_core_read: core_en
  languageId: '0'
-
  title: German
  enabled: true
  base: /de/
  typo3Language: de
  locale: de_DE.UTF-8
  iso-639-1: de
  navigationTitle: ''
  hreflang: de-DE
  direction: ''
  flag: global
  solr_host_read: solr_node_2
  solr_core_read: core_de
  languageId: '1'
rootPageId: 3
routes: { }
solr_enabled_read: true
solr_path_read: /solr/
solr_port_read: 8983
solr_scheme_read: http
solr_use_write_connection: false
```

The example above shows that you are able to define the setting `solr_host_read` on the language level. Since this is a more advanced configuration and the user interface should be kept simple, this can only be configured in the yaml.

### 14.5.3 Removed Code

The following code parts have been removed as announced in previous versions of EXT:solr:

TBD

#### 14.5.4 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Achim Fritz
- Georg Ringer
- Helmut Hummel
- Marc Bastian Heinrichs
- Marco Pfeiffer
- Markus Kobligh
- Netcoop
- Nicole Cordes
- Rafael Kahm
- Rémy DANIEL
- Sascha Egerer
- Stefan Frömken
- Stephan Jorek
- Timo Hund
- Yann Weyer
- Gerald Aistleitner

Also a big thanks to our partners that have joined the EB2019 program:

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- Bitmotion GmbH
- BIBUS AG Group
- Bitmotion GmbH
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- Consulting Piezunka und Schamoni - Information Technologies GmbH
- cosmoblond GmbH
- CS2 AG

- datamints GmbH
- Diesel Technic AG
- Die Medialen GmbH
- Direction des Systèmes d'Information - Département du Morbihan
- dörler engineering services
- E-Magineurs
- Fachhochschule für öffentliche Verwaltung NRW Zentralverwaltung
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- interactive tools GmbH - Agentur für digitale Medien
- internezzo ag
- iredults gmbh
- ITK Rheinland
- LOUIS INTERNET GmbH
- Kassenärztliche Vereinigung Bayerns (KZVB)
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- SIWA Online GmbH
- Stadt Wien - Wiener Wohnen Kundenservice GmbH
- Stadtverwaltung Villingen-Schwenningen
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#### 14.5.5 How to Get Involved

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- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

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## 14.6 Apache Solr for TYPO3 11.0

### 14.6.1 Apache Solr for TYPO3 11.0.9

Support of Apache Solr 9.4.1

Compatibility with Apache Solr 9.4.1 is checked and EXT:solr now accepts the following Apache Solr versions: - 9.2.0 - 9.2.1 - 9.3.0 - 9.4.0 - 9.4.1

To avoid breaking changes EXT:solr 11.0.9 doesn't require Solr 9.4.1, but it's strongly recommended to use the latest supported version.

Note that due to CVE-2023-50290 you should at least check your configuration or update to at least Apache Solr 9.3.0.

Small improvements and bugfixes

- [TASK:BP:11.0] Prepend wrong fe language on empty cache by @goldi42
- [BUGFIX:BP:11.0] Fix connection initialization by @dkd-friedrich in #10
- [BUGFIX] Handle float values in options facet parser by @dkd-kaehm in #12
- [BUGFIX:11.0] Exception with tx\_solr\_statistics after latest TYPO3 security update by @dkd-kaehm in #13
- [TASK] Remove unused field `cookie` in tx\_solr\_statistics by @dkd-kaehm in #22
- [TASK] Allow Apache Solr 9.4 by @dkd-friedrich in #25
- [BUGFIX] Fix result highlighting fragment size by @dkd-friedrich in #26

### 14.6.2 Apache Solr for TYPO3 11.0.8

We are happy to release EXT:solr 11.0.8 maintenance release, this release is a non-public ELTS release.

Support of Apache Solr 9.2.0

Apache Solr 8.5.1 is outdated, thus we now provide support of Apache Solr 9.2. Technically an update is not required, but recommended to avoid possible security issues in no longer supported Apache Solr versions. If you can't update your Apache Solr server right now, EXT:solr 11.0.8 should still work with 8.5, but you'll see warnings in the reports module.

Note: With Apache Solr 9 the following components are no longer available and you have to adapt the configuration if needed. No longer available components are:

- 1) Data Import Handler (DIH) DIH is an independent project now; it is no longer a part of Solr
- 2) VelocityResponseWriter VelocityResponseWriter is an independent project now; it is no longer a part of Solr. This encompasses all previously included `/browse` and `wt=velocity` examples.

Small improvements and bugfixes

- [TASK:Security:P:ELTS\_9.5] Update jQuery and its plugin libs by @dkd-kaehm in #3
- [BUGFIX:BP:11.0] Respect indexingPriority in QueueItemRepository by @dkd-friedrich in #5
- [TASK] Integrate in packagist.com : conflict with non ELTS EXTsolr by @dkd-kaehm in #4
- [BUGFIX:BP:11.0] Sanitize frequent and last searches output by @dkd-friedrich in #6

- [BUGFIX] Fix TypeError in StatisticsWriterProcessor by @dkd-friedrich in #6
- [TASK] Remove unneeded GitHub actions by @dkd-friedrich in #6
- [TASK] Remove unneeded TYPO3 version from matrix by @dkd-friedrich in #6
- [BUGFIX] Try to solve conflicts issue on composer on CI by @dkd-kaehm in #7
- [TASK] Prepare configsets for 11.0 ELTS by @dkd-friedrich in #8
- [BUGFIX:BP:11.0] Fix expected variant results by @dkd-friedrich in #8
- [TASK] Update version matrix by @dkd-friedrich in #8

### 14.6.3 Apache Solr for TYPO3 11.0.7

TYPO3 9 LTS reached the ELTS stage: free community support for TYPO3 9 LTS ended on 30 sept. 2021. We'll join the TYPO3s ELTS regiment and provide EXT:solr support for TYPO3 9 ELTS upwardly via our EB program. Therefore the EXT:solr release-11.0.x will not be maintained in TYPO3-Solr/ext-solr repository any more. The maintenance and builds will be moved to other place. The new EXT:solr 11.0.8+ for TYPO3 9 ELTS versions will be provided via dkds EB program.

### 14.6.4 Apache Solr for TYPO3 11.0.6

This is a bugfix-only release that contains only bugfixes

This is a bugfix-only release that contains:

- [BUGFIX:BP:11-0] Respect TCA setting of 'tstamp' field (#3037)
- [BUGFIX:BP:11.0] Update SolrNotAvailable.html (#3020)
- [BUGFIX] Recursive constants (#3048)
- [BUGFIX] Follow up to recursive constants (#3058)
- [BUGFIX:BP:11.0] Don't use jQuery.ajaxSetup (#2503)
- [TASK:11.0] Replace mirrors for Apache Solr binaries on install-solr.sh (#3094)

### 14.6.5 Apache Solr for TYPO3 11.0.5

This is a bugfix-only release that contains only bugfixes

- [TASK] 2021.12.13 Rebuild Docker images due of(CVE-2021-44228)
- [BUGFIX] Delete documents for valid connections only b99d7ad (#2940)
- [TASK] Make Apache Solr v8.6+ compatible 12b9483 (#2938)
- [TASK] Bump Chart.js to v2.9.4 4eacf89 (#2946)
- [BUGFIX] use pages configuration as default #issue-2742 d05f77e (#2742)
- [BUGFIX] ENV vars not handled correctly in site management module d83c7d1 (#2576)
- [BUGFIX] Delete synonyms with URL special chars 5905fdb (#2336)
- [BUGFIX] Fix typo in CoreOptimizationModule/Index.html 3163d25 (#2965)
- [BUGFIX] Use correct html tags in templates 31e2d2c (#2970)
- [BUGFIX] Add missing applicationType to faked request 19baedc (#2932)
- [TASK] Add language cache to SiteUtility 6f7e4d1 (#2908)
- [BUGFIX] writing errorHandling of site configuration 1ff6ca3 (#2913)
- [TASK] Make language cache work with multi site setups b7a39c1 (#2986)
- [BUGFIX] set base uri to face frontend request 2c34ae9 (#2914)

- [BUGFIX] `getRangeString()`: check type before `format()` - call a99275a (#2942)
- [BUGFIX] Fix type error in `UrlHelper` 17f1653 (#2756)

#### 14.6.6 Apache Solr for TYPO3 11.0.4

This is a bugfix-only release that contains

- [BUGFIX] Removes secondary parameter c6a9dcc (#2746)
- [DOCS] Use `*_PORT` variable for setting the port fca6f68 (#2759)
- [BUGFIX] Correct Content-Type header for suggest response e843b44 (#2783)
- [TASK] Change configuration files to TYPO3 file extensions 6d513e6 (#2813)
- [BUGFIX] garbage collector on translations 9adcc40 (#2797)
- [BUGFIX] Quote field within score calculation 3969340 (#2824)
- [BUGFIX] disabled Solr Sites e7bc3ab (#2795)
- [BUGFIX] Enable unicode when fetching pages eb33376 (#2810)
- [TASK] Disable cache time information for ajax request f54213f (#2834)
- [TASK] Adjust composer TYPO3 version constrains for EXT:Solr 11.0.4+ 50df86a (#2844)
- [FEATURE] Allow `stdWrap` on sorting label 5f2cee2 (#2339)
- [BUGFIX] Fix handling of case sensitive variant ids (#2865)
- [FEATURE] Store number of existing variants 9c88401 (#2870)
- [BUGFIX] Function call with non existing variable 0a69d45 (#2842 / #2520)
- [BUGFIX:BACKPORT:11] Fix missing variant field value 8e0c648 (#2878)
- [BUGFIX] Exception on Cached state of `TranslateViewHelper` 1765751 (#2830)
- [BUGFIX] Check if `$recordUid` is non-numeric before substitution a9cf555 (#2836)
- [TASK] Remove usages of `Prophet` by all occurrences within TYPO3 API 3bbf25a, 45b1703, 4f2b37a (#2862)
- [TASK] Remove TYPO3 long time ago deprecated cache class 79cafe9 (#2782)
- [BUGFIX] Change filter for workspace 5408889 (#2847)
- [BUGFIX] Use `Iconfactory` to retrieve record icons fa77962 (#2900)
- [BUGFIX] Language overlay for records is not retrieved since solr Version 11.x (#2788)
- [BUGFIX] Temporary free mode fix d5e936b
- [BUGFIX] Content id in language aspect c84ce1b
- [BUGFIX] Language aspect for indexer 9af09f3
- [BUGFIX] remove escaping on suggestion prefix f70829e (#2917)
- [FEATURE] Exclude sub entries of page/storage recursively 4151a25 (#2934)
- [BUGFIX] Make relevance sorting option markable as active bc813c8 (#2922)

#### 14.6.7 Apache Solr for TYPO3 11.0.3

This is a bugfix-only release that contains only a few bugfixes

- [TASK] Use minor version of solr docker image (#2740)
- [BUGFIX] Make sure `HtmlContentExtractor::cleanContent()` is UTF-8 safe (#2514)
- [BUGFIX] Database exception in `RecordMonitor` for records no-“enable” columns (#2512)

- [BUGFIX] Indexing of records fails with solr 10.x (#2521)
- [BUGFIX] Hard codes plugin namespace (#2732)
- [BUGFIX] Restricted pages are not being indexed in Typo3 10 (#2695)
- [BUGFIX] Prevent duplicate urls for page 0 (#2718)
- [BUGFIX] Fix assignment for page uid variable (#2664)
- [BUGFIX] Use num\_found in static db table (#2668)
- [BUGFIX] Build core base path right, when path is slash only (#2692)
- [BUGFIX] Fix missing renderType attribute in flexform for search plugin (#2669)
- [BUGFIX] Add option to override 'port' in frontend indexing URL (#2618)
- [BUGFIX] Reset uriBuilder before building a new uri (#2658)
- [DOCS] Multiple improvements to the docs

#### 14.6.8 Apache Solr for TYPO3 11.0.2

This is a bugfix-only release that contains only a few bugfixes

- [TASK] Add warning in the docs that a fqdn is required for the sitehandling
- [BUGFIX] Re-enable Integration Tests for TYPO3 v10
- [BUGFIX] Fix unit tests with new controller context check
- [BUGFIX] Fix tests and add groups for tests
- [BUGFIX] Remove mocks in TYPO3 v10 Integration tests
- [BUGFIX] Remove unneeded constant
- [BUGFIX] Fix travis.yml to use correct stable versions
- [BUGFIX] Ensure to hand in PSR-7 Request to TSFE->getPageAndRootlineWithDomain
- [BUGFIX] Remove unneeded is\_siteroot flag in nested storage folder
- [BUGFIX] Always return array on non-mounted sites
- [BUGFIX] Fix multiple rootpages in nested sites
- [BUGFIX] Prevent SiteNotFoundException in reports module

#### 14.6.9 Apache Solr for TYPO3 11.0.1

This is a bugfix-only release that contains only a few bugfixes

- [BUGFIX] Fix documentation and Versionmatrix
- [BUGFIX] Fix failing build on docker hub

#### 14.6.10 Apache Solr for TYPO3 11.0.0

We are happy to release EXT:solr 11.0.0. The focus of this release was the support of TYPO3 10 LTS.

**Important:** This version is installable with TYPO3 9 and 10 LTS. For TYPO3 9 LTS at least version 9.5.16 is required. EXT:solr 11 requires the usage of the TYPO3 site handling for the configuration of solr.

The `legacyMode`` that allows the usage of domain records and configuration of solr cores in TypoScript was dropped with EXT:solr 11.

### 14.6.11 New in this release

#### Support of TYPO3 10 LTS

With EXT:solr 11 we provide the support of TYPO3 10 LTS. If you update to EXT:solr 11, make sure, that you are using the TYPO3 site management to manage your Apache Solr endpoints.

Thanks to: Achim Fritz & b13 for the support on that topic

#### Support of Apache Solr 8.5.1

With EXT:solr 11 we support Apache Solr 8.5.1, the latest release of Apache Solr.

To see what was changed in Apache Solr 8.5.x please read the release notes of Apache Solr:

<https://archive.apache.org/dist/lucene/solr/8.5.1/changes/Changes.html>

#### Small improvements and bugfixes

Beside the major changes we did several small improvements and bugfixes:

- Enable SuggestAction to Provide pure JSON <https://github.com/TYPO3-Solr/ext-solr/pull/2544> (Thanks to Julian Strecker)
- Update PHP class docblock <https://github.com/TYPO3-Solr/ext-solr/pull/2543> (Thanks to Jens Jacobsen)
- Add typecasting <https://github.com/TYPO3-Solr/ext-solr/pull/2487> (Thanks to dev-rke)
- Fix misinterpreted environment variables <https://github.com/TYPO3-Solr/ext-solr/pull/2550> (Thanks to in2code and Markus Friedrich)
- IndexInspector is showing wrong core to document relation <https://github.com/TYPO3-Solr/ext-solr/issues/2553> (Thanks to Timo Hund)
- Implode deprecation for PHP 7.4 <https://github.com/TYPO3-Solr/ext-solr/pull/2558> (Thanks to Goddart Gothe)
- Place autocomplete div inside form <https://github.com/TYPO3-Solr/ext-solr/issues/2569> (Thanks to Koen Wouters)
- Docker image managed resources are not writable <https://github.com/TYPO3-Solr/ext-solr/pull/2583> (Thanks to Rafael Kähm)
- Fix indexing when default language is disabled in site config <https://github.com/TYPO3-Solr/ext-solr/pull/2596> (Thanks to Patrick Daxböck, Hannes Lau, Kai Lochbaum & Timo Hund)
- Use object manager in all places of facet creation <https://github.com/TYPO3-Solr/ext-solr/pull/2532> (Thanks to Sascha Nowak)
- Allow Wildcards in Filter Queries <https://github.com/TYPO3-Solr/ext-solr/pull/2535> (Thanks to Philipp Parzer)
- Add FAQ for different host/port configuration <https://github.com/TYPO3-Solr/ext-solr/pull/2509> (Thanks to Florian Langer)
- Replace current URL with new filter URL <https://github.com/TYPO3-Solr/ext-solr/pull/2557> (Thanks to Klaus Hörmann-Engl)
- Add colon after user if password given <https://github.com/TYPO3-Solr/ext-solr/pull/2537> (Thanks to Thomas Löffler)
- Remove eval int from port in site configuration <https://github.com/TYPO3-Solr/ext-solr/pull/2599> (Thanks to Georg Ringer)
- Replace usage of TYPO3\_branch <https://github.com/TYPO3-Solr/ext-solr/pull/2600> (Thanks to Georg Ringer)
- Remove langdisable=1 in FlexForms <https://github.com/TYPO3-Solr/ext-solr/pull/2601> (Thanks to Georg Ringer)

### 14.6.12 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- dev-rke
- Florian Langer
- Georg Ringer
- Goddart Goth
- Hannes Lau
- Jens Jacobsen
- Kai Lochbaum
- Klaus Hörmann-Engl
- Koen Wouters
- Markus Friedrich
- Markus Schwemer
- Patrick Daxböck
- Philipp Parzer
- Rafael Kähm
- Sascha Nowak
- Thomas Löffler
- Timo Hund

Also a big thanks to our partners that have joined the EB2020 program:

- +Pluswerk AG
- .hausformat GmbH
- 3m5. Media GmbH
- 4eyes GmbH
- Agora Energiewende Smart Energy for Europe Platform (SEFEP) gGmbH
- Amedick & Sommer Neue Medien GmbH
- AUSY SA
- b13 GmbH
- BARDEHLE PAGENBERG Partnerschaft mbB
- BIBUS AG Group
- Bitmotion GmbH
- brandung GmbH & Co. KG
- cab services ag
- clickstorm GmbH
- comwrap GmbH
- cron IT GmbH
- CS2 AG

- cyperfection GmbH
- digit.ly GmbH
- Digitale Offensive GmbH Internetagentur
- E-Magineurs
- Eidg. Forschungsanstalt WSL
- FGTCCLB GmbH
- FTI Touristik GmbH
- GAYA - Manufacture digitale
- Hochschule für Polizei und öffentliche Verwaltung Nordrhein-Westfalen
- hotbytes GmbH & Co. KG
- IHK Neubrandenburg
- in2code GmbH
- Inotec Sicherheitstechnik GmbH
- jweiland.net
- Kassenzahnärztliche Vereinigung Bayerns (KZVB)
- Kassenärztliche Vereinigung Rheinland-Pfalz
- Landeskriminalamt Thüringen
- LfdA – Labor für digitale Angelegenheiten GmbH
- Macaw Germany Cologne GmbH
- Marketing Factory Consulting GmbH
- Masterflex SE
- mehrwert intermediale kommunikation GmbH
- mm Online Service
- netlogix GmbH & Co. KG
- Open New Media GmbH
- plan.net - agence conseil en stratégies digitales
- plan2net GmbH
- PROFILE MEDIA GmbH
- ressourcenmangel dresden GmbH
- RKW Rationalisierungs- und Innovationszentrum der Deutschen Wirtschaft e. V.
- ruhmesmeile GmbH
- Sandstein Neue Medien GmbH
- Stadt Wien - Wiener Wohnen Kundenservice GmbH
- Stefan Galinski Internetdienstleistungen
- TOUMORØ
- Typoheads GmbH
- unternehmen online GmbH & Co. KG
- VisionConnect GmbH
- werkraum Digitalmanufaktur GmbH

- WIND Internet
- zimmer7 GmbH

### 14.6.13 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

- Submit bug reports and feature requests on [GitHub](<https://github.com/TYPO3-Solr/ext-solr>)
- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

Support us by becoming an EB partner:

<http://www.typo3-solr.com/en/contact/>

or call:

+49 (0)69 - 2475218 0

## 14.7 Apache Solr for TYPO3 11.1.0

We are happy to release EXT:solr 11.1.0. The focus of this release has been on URL and SEO optimizations.

**Important:** This version is installable with TYPO3 10 LTS only and contains some breaking changes, see details below.

### 14.7.1 New in this release

#### Route enhancers

Introduce the TYPO3s route enhancer functionality for facets. This feature allows to mask facets inside the query string or as part of the path segment.

See: \* <https://github.com/TYPO3-Solr/ext-solr/pull/2755> \* <https://docs.typo3.org/m/typo3/reference-coreapi/10.4/en-us/ApiOverview/Routing/AdvancedRoutingConfiguration.html> \* <https://docs.typo3.org/p/apache-solr-for-typo3/solr/11.1/en-us/Routing/Index.html>

#### Associative keys for tx\_solr[filter] facet URL parameters

Introduce a new style how the facet array represented inside of the url with a combination of key and value in order to be able to keep a specific order.

This feature allows to change the url parameters from index based to associative keys for facets. Using associative keys, the value of a facet will be replaced with 1. A value of 1 means, that the facet is active. A value of 0 means, the value is inactive.

Additionally a new sort option for url parameters is available. The sort of parameters is mandatory for associative keys.

By default Solr behaves as before and will be changed in future releases.

See: <https://github.com/TYPO3-Solr/ext-solr/pull/2705>

#### ASCII and Scandinavian Folding Filter

To improve the search behaviour we introduce folding filters, e.g. allowing to skip accents in search terms. The following languages are now using the ASCII folding filter:

- dutch

- english
- finish
- french
- german
- hungarian
- irish
- italian
- polish
- portuguese
- serbian (for fields that don't include the Serbian Normalization Filter)
- spanish
- turkish

For the Scandinavian languages, Norwegian, Swedish and Danish, a similiar approach is used, but we're using the more specialized Scandinavian Normalization and Scandinavian Folding Filters.

Folding process usally takes place at a late stage, so your configurations shouldn't be affected. But for the Scandinavian languages the Scandinavian Normalization Filter processes the terms earlier, so your protected words for the Snowball Porter Filter, e.g. danish/protwords.txt, might be affected, please be sure to use the right spelling (see [https://solr.apache.org/guide/8\\_8/language-analysis.html#scandinavian-normalization-filter](https://solr.apache.org/guide/8_8/language-analysis.html#scandinavian-normalization-filter)).

See: <https://github.com/TYPO3-Solr/ext-solr/pull/2963>

cHash configuration

EXT:solrs components like range facets can not be properly handled by cHash stack, because the amount of possible range-combinations is infinite, therefore they must be excluded from cHash calculation.

This change makes it possible to exclude all EXT:solr parameters from cache hash. To prevent misconfigurations, the new extension configuration setting "pluginNamespaces" was introduced, which is used in FlexForm and in TYPO3\_CONF\_VARS/FE/cacheHash/excludedParameters. This setting makes it impossible to chose invalid/unhandled EXT:solr plugin namespace on FlexForm (Plugin -> Options -> Plugin Namespace)

Please follow the following migration instructions

Plugin namespaces: Needed only if other as default (tx\_solr) plugin namespace is used in instance. Add the used namespace[s] to \$GLOBALS['TYPO3\_CONF\_VARS']['EXTENSIONS']['solr']['pluginNamespaces'] or via backend "Settings" -> "Extension Configuration" -> "solr" -> "A list of white listed plugin namespaces"

Global q parameter: Needed only if global "q" parameter without plugin namespace is used and wants to be included in cache hash calculation. Set the setting \$GLOBALS['TYPO3\_CONF\_VARS']['EXTENSIONS']['solr']['pluginNamespaces'] = '1' or enable it via backend "Settings" -> "Extension Configuration" -> "solr" -> "Include/Exclude global q parameter in/from cacheHash"

See: \* <https://github.com/TYPO3-Solr/ext-solr/commit/7b0e77c2680d9dea7861f7bcd33abc1e8664f289> \* <https://github.com/TYPO3-Solr/ext-solr/pull/2972>

Scheduler task to optimize solr cores

This task allows you to optimize the indexes of given cores for a site at a planned time.

See: \* <https://github.com/TYPO3-Solr/ext-solr/issues/2649> \* <https://github.com/TYPO3-Solr/ext-solr/pull/2666> \* <https://docs.typo3.org/p/apache-solr-for-typo3/solr/11.1/en-us/Backend/Scheduler.html#optimizing-cores-of-a-site>

## Apache Solr 8.9.0 support

With EXT:solr 11.1 we support Apache Solr 8.9.0, the latest release of Apache Solr.

To see what has changed in Apache Solr please read the release notes of Apache Solr: [https://solr.apache.org/docs/8\\_9\\_0/changes/Changes.html](https://solr.apache.org/docs/8_9_0/changes/Changes.html)

## Map managed resources to core-name

Makes it possible to manage resources per core instead of previously used per schema approach. Now is it possible to maintain the stopwords and synonyms for each core/site separately, and avoid mixing the synonyms between sites using same core.

See: \* <https://github.com/TYPO3-Solr/ext-solr/issues/2635> \* <https://github.com/TYPO3-Solr/ext-solr/pull/2794> \* <https://github.com/TYPO3-Solr/ext-solr/commit/fde8a64be3de538339e1608fbc44a8160ab9f023>

## Update to Solarium 6

Solarium is upgraded from version 4 to version 6, so due to changes in Solarium various classes and data types had to be adapted.

There are two major changes you have to consider while upgrading:

- TypoScript option `plugin.tx_solr.solr.timeout` is dropped, settings for HTTP client `$GLOBALS['TYPO3_CONF_VARS']['HTTP']` are now taken into account
- Solr path mustn't be prepended with `"/solr/"`, refer to the "Getting Started > Configure Extension" section in our manual

## Drop TYPO3 9 compatibility

To simplify the development we've dropped the compatibility for TYPO3 9 LTS. If you need to use TYPO3 9 please use the 11.0.x branch.

## Small improvements and bugfixes

Beside the major changes we did several small improvements and bugfixes:

- [TASK] Update TypoScript condition to Expression Language .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2996>
- [BUGFIX] Use correct information about results per page in pagination .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2516>
- [BUGFIX] `getRangeString()`: check type before `format()` - call .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2942>
- [BUGFIX] set base uri to face frontend request .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2915>
- [TASK] Add language cache to SiteUtility .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2908> \* [TASK] Make language cache work with multi site setups .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2986>
- [BUGFIX] Changes on sub-tree of mounted source pages are not recognized .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2925>
- [BUGFIX] Record indexing doesn't work anymore if page queue is disabled .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2241>
- [FEATURE] Add and improve translations .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2874>
- [TASK] Add Danish dictionary compound word token filter .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2975>
- [BUGFIX] Add missing applicationType to faked request .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2933>
- [BUGFIX] Use correct html tags in templates .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2970>

- [BUGFIX] Fix typo in CoreOptimizationModule/Index.html .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/eb39ca60d45203e02ba282bd74211d8f35ddaf26>
- [BUGFIX] Delete synonyms with URL special chars .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2959/commits/0a6456d3221ab36d896f96a6018636682d60198f>
- [BUGFIX] ENV vars not handled correctly in site management module .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2576>
- [TASK] Use LowerCaseFilterFactory .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/7a6ae684515333636a7761eb7e67db98363e6f8b>
- [TASK] Bump Chart.js to v2.9.4 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2946>
- [BUGFIX] Delete documents for valid connections only .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2939>
- [BUGFIX] Make relevance sorting option markable as active .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2852>
- [FEATURE] Exclude sub entries of page/storage recursively .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2432>
- [BUGFIX] Pass FrontendUserAuthentication to TypoScriptFrontendController .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2761>
- [BUGFIX] remove escaping on suggestion prefix .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2917>
- [BUGFIX] Language aspect for indexer .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2841> \* [BUGFIX] Content id in language aspect \* [BUGFIX] Temporary free mode fix
- [BUGFIX] Use Iconfactory to retrieve record icons .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2900>
- [BUGFIX] Adapt extractByQuery for Tika 1.24 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2897/commits/3dfe978926d703bb792e5b4aab68958b77f49d36>
- [FEATURE] Store number of existing variants .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2870> \* [BUGFIX] Fix expected variant results .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2897/commits/be0913d3541c9979ef492f588fd8bcc4796de1b4> \* [BUGFIX] Fix missing variant field value .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2879> \* [BUGFIX] Fix handling of case sensitive variant ids .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2865>
- [BUGFIX] Change filter for workspace .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2847>
- [TASK] Remove TYPO3 long time ago deprecated cache class (#2884) .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2782>
- [BUGFIX] Check if \$recordUid is non-numeric before substitution .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2836>
- [BUGFIX] Exception on Cached state of TranslateViewHelper .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2830>
- [BUGFIX] Function call with non existing variable .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2842>
- [FEATURE] Allow stdWrap on sorting label .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2339>
- [TASK] Disable cache time information for ajax request .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2833>
- [BUGFIX] using named parameter for empty string comparison .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2703>
- [BUGFIX] removing backticks in addSelectLiteral .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2701>
- [BUGFIX] Enable unicode when fetching pages .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2810>

- [BUGFIX] Sites with no Solr Configuration should not be considered .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2795>
- [BUGFIX] Quote field within score calculation .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2824>
- [BUGFIX] garbage collector on translations .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2797>
- [TASK] Refactor class UrlHelper .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2758>
- [BUGFIX] Use rawurlencode on facets to handle .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2806>
- [TASK] Change configuration files to TYPO3 file extensions .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2814>
- [BUGFIX] Unset extendToSubPages & hidden doesn't requeue subpages .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2433>
- [BUGFIX] Error by textTight on some values .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2180>
- [DOCS] Fix TypoScript path for lastSearches in the docs .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/dddcfc6a27a6801b9eccf4b57c0c654e055b1df>
- [TASK] Remove mentions on Apache\_Solr\_Document .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2789>
- [BUGFIX] Correct Content-Type header for suggest response .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2783>
- [DOCS] Use \*\_PORT variable for setting the port .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/4d264f28ef5a288039ae860015ee29013d8fcb8a>
- [BUGFIX] Deprecated second parameter for BackendUserAuthentication->modAccess is used .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2746>
- [TASK] Add .editorconfig .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2768>
- [TASK] Make sure HtmlContentExtractor::cleanContent() is UTF-8 safe .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2513>
- [BUGFIX] Fix #2511: database exception in RecordMonitor .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2511>
- [BUGFIX] Indexing of records fails with solr 10.x+ .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2520>
- [DOCS] Fix path of suggest in typoscript settings .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2678>
- [DOCS] Fix links in docs and CONTRIBUTING.md .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2697>
- [BUGFIX] Hard codes plugin namespace .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2691>
- [BUGFIX] Restricted pages are not being indexed in Typo3 10 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2634>
- [DOCS] Note that config.index\_enable is still needed .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2735>
- [BUGFIX] Prevent duplicate urls for page 0 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2718>
- [BUGFIX] Fix assignment for page uid variable .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2663>
- [BUGFIX] Build core base path right, when path is slash only .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2680>
- [BUGFIX] Record Monitoring .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/fb504489bd1090e21f777672da35248c0df18c6d>
- [DOCS] Improvements for contributing to the documentation .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2690>
- [TASK] Drop TYPO3 9.5 LTS support for future release 11.1.x

- [BUGFIX] use num\_found in static db table .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2667>
- [BUGFIX] Fix missing renderType attribute in flexform for search plugin .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2661>
- [FEATURE] Add option to override 'port' in frontend indexing URL .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2327>
- [BUGFIX] Set accurate center position for loading animation .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/pull/2568>
- [BUGFIX] Reset uriBuilder before building a new uri .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2656>
- [BUGFIX] Prevent SiteNotFoundException in reports module .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2624>
- [FEATURE] Change FileWriter configuration to use logFileInfix .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2626>
- [BUGFIX] Ensure to hand in PSR-7 Request to TSFE->getPageAndRootlineWithDomain .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2640>
- ... See older commits, which are a part of previous releases: <https://github.com/TYPO3-Solr/ext-solr/commits/master?after=ec72de7f14c16ee985ab26b5b6791518e348de96+139&branch=master>

### 14.7.2 Contributors

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Achim Fritz
- Benni Mack
- Christoph Lehmann
- Daniel Koether
- Daniel Siepmann
- Dmitry Dulepov
- @dev-rke
- @dsone
- @FearFreddy
- @Figilano
- @frommo
- Georg Ringer
- Jens Jacobsen
- Lars Tode
- @leslawp
- Marc Bastian Heinrichs
- Markus Friedrich
- Markus Kobligk
- Michiel Roos
- Peter, CyberForum e.V

- Philipp Kitzberger
- Rafael Kähm
- Ruud Silvrants
- Sascha Egerer
- Sebastian Hofer
- Sebastian Michaelson
- Stefano Kowalke
- Stephan Brun
- Sybille Peters
- Timo Hund
- Tobias Kretschmann

Also a big thanks to our partners that have joined the EB2021 program:

- +Pluswerk AG
- 711media websolutions GmbH
- Abt Sportsline GmbH
- ACO Severin Ahlmann GmbH & Co. KG
- AVM Computersysteme Vertriebs GmbH
- cosmoblond GmbH
- creativ clicks GmbH
- cron IT GmbH
- CS2 AG
- CW Media & Systems
- Earlybird GmbH & Co KG
- Earlybird GmbH & Co KG
- FLOWSITE GmbH
- form4 GmbH & Co. KG
- Getdesigned GmbH
- Granpasso Digital Strategy GmbH
- Ikanos GmbH
- internezzo ag
- Intersim AG
- Ion2s GmbH
- Leitgab Gernot
- mellowmessage GmbH
- Moselwal Digitalagentur UG (haftungsbeschränkt)
- network.publishing Möller-Westbunk GmbH
- OST Ostschweizer Fachhochschule
- Plan.Net Suisse AG
- Provitex GmbH

- punkt.de GmbH
- queo GmbH
- Rechnungshof
- Schoene neue kinder GmbH
- SIT GmbH
- SIZ GmbH
- Stämpfli AG
- Triplesense Reply Frankfurt
- TWT reality bytes GmbH
- visol digitale Dienstleistungen GmbH
- Web Commerce GmbH
- webconsulting business services gmbh
- webschuppen GmbH
- Webstobe GmbH
- Webtech AG
- wow! solution
- XIMA MEDIA GmbH
- Bundesanstalt Statistik Österreich
- ECOS TECHNOLOGY GMBH
- Fachhochschule Erfurt
- Hochschule Furtwangen - IMZ Online-Services
- Hochschule Niederrhein University of Applied Sciences
- l' Autorité des marchés financiers
- La Financière agricole du Québec
- LfdA - Labor für digitale Angelegenheiten GmbH

### 14.7.3 How to Get Involved

There are many ways to get involved with Apache Solr for TYPO3:

- Submit bug reports and feature requests on [GitHub](<https://github.com/TYPO3-Solr/ext-solr>)
- Ask or help or answer questions in our [Slack channel](<https://typo3.slack.com/messages/ext-solr/>)
- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
- Go to [www.typo3-solr.com](<http://www.typo3-solr.com>) or call [dkd](<http://www.dkd.de>) to sponsor the ongoing development of Apache Solr for TYPO3

Support us by becoming an EB partner:

<https://shop.dkd.de/Produkte/Apache-Solr-fuer-TYPO3/>

or call:

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## 14.8 Apache Solr for TYPO3 11.2

### 14.8.1 Apache Solr for TYPO3 11.2.6 ELTS

This is a non-public maintenance release for TYPO3 10.4 ELTS, containing:

- [FEATURE] Add arm64 platforms to docker-images and push to registry.dkd.de by Rafael Kähm (9a56f004a)
- [TASK] Allow Apache Solr 9.8.1 by Rafael Kähm (d6d6de2c7)
- [TASK] Set proper retention-days on actions/upload-artifact by Rafael Kähm (96b119381)
- Revert “[TASK] Integrate TYPO3 10.4 ELTS” by Rafael Kähm (20a596125)

### 14.8.2 Apache Solr for TYPO3 11.2.5 ELTS

This is a non-public security release for TYPO3 10.4 ELTS, containing:

!!![SECURITY] Update to Apache Solr 9.8.0 : CVE-2025-24814

Updates EXT:solr to Apache Solr 9.8.0.

Apache Solr 9.8.0 disables the possibility to load the `jar` files with `lib` directive by default, which was used to load `jar` files within the EXT:solr configsets. Apache Solr 10.0.0 will drop that functionality. All Apache Solr libs, modules or plugins must be configured within the main server configuration files. See: <https://issues.apache.org/jira/browse/SOLR-16781>

Impact:

Docker

You can wipe the volume and start the container with v. 11.2.5+ image, but that method will wipe the index as well.

See the script `EXT:solr/Docker/SolrServer/docker-entrypoint-initdb.d-as-sudo/fix-CVE-2025-24814.sh`

Other server setups

You have 2 possibilities to fix that issue in your Apache Solr Server:

(PREFERRED) Migrate the EXT:solr’s Apache Solr configuration

Refer to <https://github.com/TYPO3-Solr/ext-solr/pull/4290/files> .

Following 3 files are relevant:

- Changes in `<Apache-Solr data dir>/configsets/ext_solr_11_2_0_elts/conf/solrconfig.xml`
- Changes in `<Apache-Solr data dir>/solr.xml`
- Movement from `<Apache-Solr data dir>/configsets/ext_solr_11_2_0_elts/typo3lib/solr-typo3-plugin-6.0.0.jar`
  - to `<Apache-Solr data dir>/typo3lib/solr-typo3-plugin-6.0.0.jar`

Steps:

1. Remove all occurrences of `<lib dir=".*` from `<Apache-Solr data dir>/configsets/ext_solr_11_2_0_elts/conf/solrconfig.xml` file.
2. Replace in `<Apache-Solr data dir>/solr.xml` file the snippet by
3. Move the directory from `<Apache-Solr data dir>/configsets/ext_solr_11_2_0_elts/typo3lib`

- to <Apache-Solr data dir>/typo3lib

(NOT-RECOMMENDED) Re-enable <lib> directives on Apache Solr >=9.8.0 <10.0.0

Add following to /etc/default/solr.in.sh file

Or do that in other ways to set the `solr.config.lib.enabled=true` to sys-props of Apache Solr Server.

!!![FIX] Docker execution order issue for as-sudo tweaks

This change renames the file

- from /docker-entrypoint-initdb.d/as-sudo-tweaks.sh
- to /docker-entrypoint-initdb.d/0\_as-sudo-tweaks.sh

and moves the folder

- from /docker-entrypoint-initdb.d/as-sudo/
- to /docker-entrypoint-initdb.d-as-sudo/

to fix the execution order issue when setting the correct file permissions when starting the docker container, leading to a `Operation not permitted` errors.

More details see:

- <https://github.com/TYPO3-Solr/ext-solr/issues/3837#issuecomment-2461668377>.
- <https://github.com/TYPO3-Solr/ext-solr/pull/4219#issuecomment-2622600937>

Impact:

This change requires adjustments in your Docker setup, only if you modified:

- files in folder /docker-entrypoint-initdb.d/as-sudo/
- file /docker-entrypoint-initdb.d/as-sudo-tweaks.sh.

Make sure to use:

- /docker-entrypoint-initdb.d/0\_as-sudo-tweaks.sh instead of
  - /docker-entrypoint-initdb.d/as-sudo-tweaks.sh
- /docker-entrypoint-initdb.d-as-sudo instead of
  - /docker-entrypoint-initdb.d/as-sudo/

Upgrade to Apache Solr 9.7.0

This release requires Apache Solr v9.7.0+.

Along with the compatibility to Solr 9.7 the dependency to `SOLR_ENABLE_STREAM_BODY` is removed.

Minor changes & bugfixes

- [TASK] Update GitHub actions by @dkd-friedrich in #42
- [DOCS] Improve Solr core creation via API and other deployment parts by @dkd-kaehm & @dkd-friedrich in #42
- [TASK] Use relative path to typo3lib in Apache Solr config by @dkd-kaehm & @dkd-friedrich in #42
- [BUGFIX] Docker twaks as-sudo do not preserve the Docker image ENV by @dkd-kaehm & @dkd-friedrich in #42
- [BUGFIX] Docker tests suite does not contain all logs by @dkd-kaehm & @dkd-friedrich in #42
- [BUGFIX] docker image tests do not fail if core can not start by @dkd-kaehm & @dkd-friedrich in #42

### 14.8.3 Apache Solr for TYPO3 11.2.4 ELTS

Support of Apache Solr 9.5.0

Compatibility with Apache Solr 9.5.0 is checked and EXT:solr now accepts the following Apache Solr versions: - 9.3.0 - 9.4.0 - 9.4.1 - 9.5.0

Small improvements and bugfixes

- [BUGFIX] Handle float values in options facet parser by @dkd-kaehm in #11
- [BUGFIX:11.2] Exception with tx\_solr\_statistics after latest TYPO3 security update by @dkd-kaehm in #14
- !!![TASK] Update to Apache Solr 9.2 for TYPO3 10.4 ELTS by @dkd-kaehm in #19
- [TASK] Remove unused field cookie in tx\_solr\_statistics by @dkd-kaehm in #21
- [BUGFIX] Fix autosuggest with non-ascii terms by @dkd-friedrich in #28
- [TASK] Prepare release-11.2.x ELTS by @dkd-kaehm in #17
- [BUGFIX] Fix branch alias by @dkd-friedrich in #30
- [TASK] Allow custom ELTS repository by @dkd-friedrich in #30
- [BUGFIX:P:11.2] prevent undefined array key warning if filter is empty by Achim Fritz in #32
- [TASK] Allow Apache Solr 9.5 by @dkd-friedrich in #31

### 14.8.4 Apache Solr for TYPO3 11.2.3 - Last non ELTS release

This is a maintenance release for TYPO3 10.4 and the last non ELTS release, as TYPO3 10 LTS reaches the ELTS phase on April 30, 2023.

EXT:solr release-11.2.x will not be maintained in [TYPO3-Solr/ext-solr](#) repository any more. The maintenance and builds will be moved to a private repository and ELTS versions, EXT:solr 11.2.4+ for TYPO3 10 ELTS versions, can be obtained through the [dkd EB program](#).

This release contains:

- [BUGFIX:P:11.2] make CE search form in backend editable again by @dkd-kaehm in #3640
- [DOC] Fix wrong type for boostQuery in the docs and example by @rr-it and @dkd-kaehm in a997a2f4

### 14.8.5 Apache Solr for TYPO3 11.2.2

This release contains:

- [BUGFIX] Type-hinting for SiteUtility::getConnectionProperty() by @dkd-kaehm in #3395
- [TASK:Security:P:11.2] Update jQuery and its plugin libs by @dkd-kaehm in #3430
- [FEATURE] Add signal before search in resultsAction by @stat1x in #3391
- [BUGFIX:BP:11.2] Don't use minimum-stability dev on TYPO3 stable in build/CI by @dkd-kaehm in #3466
- [TASK] Docker version check on docker image build by @dkd-kaehm in #3524
- [BUGFIX:P:11.2] Use ConfigurationManager to get typescript in plugin FlexForm by @dkd-kaehm in #3497
- [TASK] Use PCOV for coverage instead of xDebug :: Upgrade to phpunit 8 by @dkd-kaehm in #3528
- [BUGFIX:BP:11.2] Make API eID script compatible with TYPO3 v11.5 by @dkd-friedrich in #3550
- [BUGFIX:BP:11.2] Use plugin namespace as label for flexforms by @dkd-friedrich in #3553
- [BUGFIX:BP:11.2] Respect indexingPriority in QueueItemRepository by @dkd-friedrich in #3557
- [BUGFIX:BP:11.2] use siteLanguage TypoScript object to get language id by @dkd-friedrich in #3555
- [TASK:11.2] equalize CI/Github-Actions for release-11.0|2|5 and main by @dkd-kaehm in #3467

- [BUGFIX:BP:11.2] Sanitize frequent and last searches output by @dkd-friedrich in #3592
- [BUGFIX:BP:11.2] changed from always picking the 0 array value to pic... by @dkd-friedrich in #3594
- [BUGFIX] Enforce visibility context in Tsfe by @saitho in #3050
- [TASK:BP:11.2] Disable sql handler by @dkd-friedrich in #3604

#### 14.8.6 Apache Solr for TYPO3 11.2.1

This is a maintenance release for TYPO3 10.4, containing:

- [BUGFIX] Prepend wrong fe language on empty cache (#3375)
- [TASK] Use TYPO3 IpAnonymizationUtility (#3262)
- [BUGFIX:BP:11.2] Shortcircuit work in SolrRoutingMiddleware (#3202)
- [TASK] Fix scrutinizer on release-11.2.x
- [BUGFIX:BP:11.2] Do not handle page updates on new page with uid 0 (#3338)
- [TASK] Remove not used strptime() adaption for windows.
- [BUGFIX] Respect indexing configuration for new and updated subpages (#3276)
- [BUGFIX] Ensure keywords string does not exceed database field length (#3321)
- [TASK:BP:11.2] Adapt column arrangement within sites config (#3295)
- [DOCS:BP:11.2] add missing doc for ..pageIndexed
- [BUGFIX] Fix PSR-4 Namespaces and Paths (#3285)
- [BUGFIX] Silence DebugWriter for PageIndexerRequest (#3030)
- [BUGFIX] AbstractSolrTask::setRootPageId(): Argument #1 must be of type int, string given (#3267)
- [BUGFIX:11.2] Update GarbageCollector.php (#3249)
- [DOCS] Align with new TYPO3 documentation standards (#3242)
- [DOCS] Align README.md with other extensions (#3218)
- [BUGFIX] Missing dot in configuration in numberOfResultsPerGroup method (#3098)
- [TASK] Added info about using page content in fields
- [TASK] Added info about the virtual field \_\_solr\_contents
- [BUGFIX:BP:11.2] Fix write connection (#2916)

#### 14.8.7 Apache Solr for TYPO3 11.2.0

We are happy to release EXT:solr 11.2.0. The focus of this release has been on supporting the latest Apache Solr version 8.11.1 and on optimizing the data update monitoring.

New in this release

Apache Solr 8.11.1 support

With EXT:solr 11.2.0 we support Apache Solr 8.11.1, the latest release of Apache Solr.

To see what has changed in Apache Solr please read the release notes of Apache Solr: [https://solr.apache.org/docs/8\\_11\\_1/changes/Changes.html](https://solr.apache.org/docs/8_11_1/changes/Changes.html)

## Improved data update monitoring and handling

To ensure the Solr index is up-to-date an extensive monitoring is done, in huge sites this may slow down the TYPO3 backend, as many records and pages have to be checked and updated. With EXT:solr 11.2 you can configure how EXT:solr will monitor and handle data updates, by default EXT:solr acts as in all former versions, but you can now configure a delayed update handling or even turn the monitoring off.

## Small improvements and bugfixes

Beside the major changes we did several small improvements and bugfixes:

- [TASK] Upgrade Solarium to 6.0.4 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3178>
- [BUGFIX] Fix thrown exception in Synonym and StopWordParser .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/300325221d9b4ec38b83b6d5e985d8d95ab1f9c5>
- [BUGFIX] TER releases missing composer dependencies .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3176>
- [TASK] Configure CI matrix for release 11.2 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/5a3843e191a2d3924412a43b54b48ba399e00036>
- [BUGFIX:BP:11.1] Fix autosuggest with non-ascii terms .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3096>
- [BUGFIX] Prevent unwanted filter parameters from being generated .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3126>
- [TASK] Add Czech translation .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3132>
- [TASK] Replace mirrors for Apache Solr binaries on install-solr.sh .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3094>
- [BUGFIX:BP:11-1] routeenhancer with empty filters .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3099>
- [TASK] Use Environment::getContext() instead of GeneralUtility .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/7cde5222a6203ab97d353d8eca723fa3fa924e48>
- [BUGFIX] Don't use jQuery.ajaxSetup() .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/2503>
- [TASK] Setup Github Actions :: Basics .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/e545d692ce41133fcff8ec1d294b0a9d0e68bd2a>
- [TASK] Setup Dependabot to watch "solarium/solarium" .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/commit/561815044e3651a0aaa8fa2ad4de5e2c3ccf4e3e>
- [BUGFIX] Filter within route enhancers .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3054>
- [BUGFIX] Fix NON-Composer mod libs composer.json for composer v2 .. \_\_: <https://github.com/TYPO3-Solr/ext-solr/issues/3053>
- ... See older commits, which are a part of previous releases: <https://github.com/TYPO3-Solr/ext-solr/commits/master?after=d3f9a919d44f8a72b982bdde131408b571ff02c8+139&branch=release-11-2>

## 14.8.8 Contributors

Special thanks to ACO Ahlmann SE & Co. KG for sponsoring the improved data update handling, [#3153](<https://github.com/TYPO3-Solr/ext-solr/issues/3153>)!

Like always this release would not have been possible without the help from our awesome community. Here are the contributors to this release.

(patches, comments, bug reports, reviews, ... in alphabetical order)

- Georg Ringer
- @itzonban

- Lars Tode
- Mario Lubenka
- Markus Friedrich
- Marc Bastian Heinrichs
- Michael Wagner
- Rafael Kähm

Also a big thank you to our partners who have already concluded one of our new development participation packages for Apache Solr EB for TYPO3 10 LTS (Feature, Maintenance, ELTS):

- ACO Ahlmann SE & Co. KG
- avenit AG
- b13 GmbH
- cyperfection GmbH
- in2code GmbH
- Leitgab Gernot
- medien.de mde GmbH
- TOUMORØ
- visuellverstehen GmbH
- WE DO communication GmbH GWA
- WIND Internet

#### 14.8.9 How to Get Involved

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- Provide patches through Pull Request or review and comment on existing [Pull Requests](<https://github.com/TYPO3-Solr/ext-solr/pulls>)
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