



**DrupalCon**  
Be Human, Think Digital



# Deliver a more robust search with Search API and Solr



**FOUR KITCHENS**

# Who are we anyway?

Adam Erickson

Senior Drupal Engineer - Hockey fanatic - Youth hockey coach



americkson



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Jeff Tomlinson

Architect - Generalist - Beer geek



aether



# We're Four Kitchens

**We build websites and apps that help you publish great content across all devices, platforms, and experiences.**

We work mostly with media, publishing, education, and nonprofit organizations—anybody with lots of content or data.

You make great content. We make it *go!*

[www.fourkitchens.com](http://www.fourkitchens.com)

 @fourkitchens

# So why

... are we doing this talk?



# Search is important

- Site owners want their search to work better
- Site users expect relevant results
- Search API + Apache Solr search offers a compelling solution for Drupal

# Statistics

- **59%** of web visitors frequently use internal site search
- **50%** of people go straight to the internal search box
- **15%** prefer search over the menu

Source provided in resources slide

# So where do we start

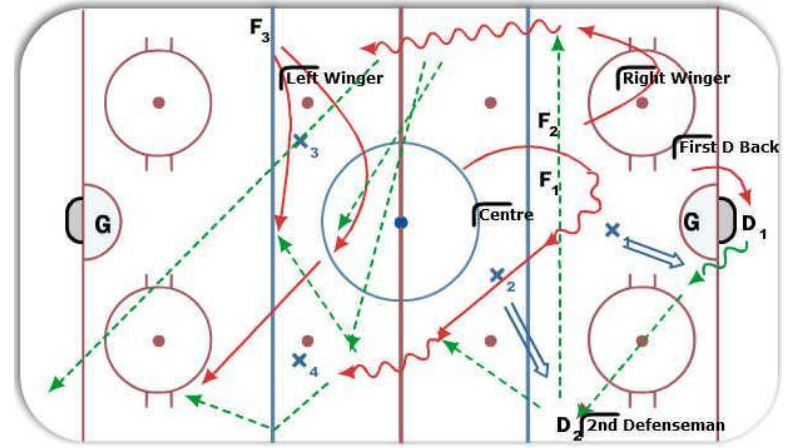
... this DOES seem important!?



# Get a game plan

When preparing to build your search:

- Ask questions
- Consider common features
- Consider your users and what might be useful to them





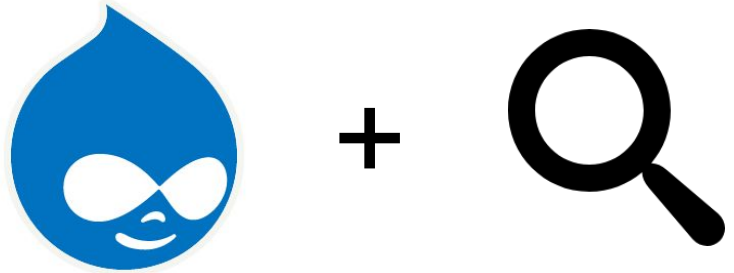
# Questions to ask

- What content should be indexed?
- Do you need multiple indexes?
- What content needs priority?
- Do you need to filter results?
- Should all content share the same display or is there a need for specialty displays?

# Search Solutions

There are several search options in the Drupal world.

Let's take a look.



# Search Solutions

- Core Drupal search
- Google Search Integration
- Search API + database
- Search API + Apache Solr
- Elasticsearch



Drupal™ Google



MySQL™



Solr



elasticsearch

# Search Solutions

Option	Level of effort	Performance	Customization	Drupal support
<b>Core search</b>	Low	Low	Low	High
<b>Google Search Integration</b>	Low	High	Low	High
<b>Search API + DB</b>	Medium	Low	High	High
<b>Search API + Solr</b>	High	High	High	Medium
<b>Elasticsearch</b>	High	High	High	Low

# Why choose Search API + Solr?

- Performant
- Highly configurable
- Supported by major Drupal hosting providers
- Battle tested

# What you will need

... to build with Search API + Solr



# What you will need

## Solr Hosting

- Provided by your Drupal host  
Pantheon, Acquia, and Platform.sh
- Other hosted Solr  
Websolr, Opensolr, Searchstax, others...
- Roll your own  
Self-hosted, Digital Ocean Droplet, AWS, etc

# What you will need continued...

## Modules

- Search API
- Search API Solr Search
- Facets
- Views



# What we will cover

... and important things to know.



# What we will cover

- Set up your connection to your Solr server and index
- A strategy for indexing Paragraphs
- Tuning search results
- Creating the search view
- Configure facets

# Important things to know

## Search API Servers

- These are configuration entities
- Manage the connection to the search backend
- Could be a database, Solr, Elasticsearch, etc.

# Important things to know

## Search API Indexes

- Define entity types and bundles that are indexed
- Define fields that are indexed
- Pre and post processing of the indexed content

# Important things to know

## Facets

- Facets have the ability to keep context to the current search results
- Exclude objects that don't meet certain criteria
- Provide flexibility
- Filter with the speed

# Important things to know

## Search View

- Just using core Views
- The view is based off of the Search API Index
- Using fields to render results with a highlighted excerpt

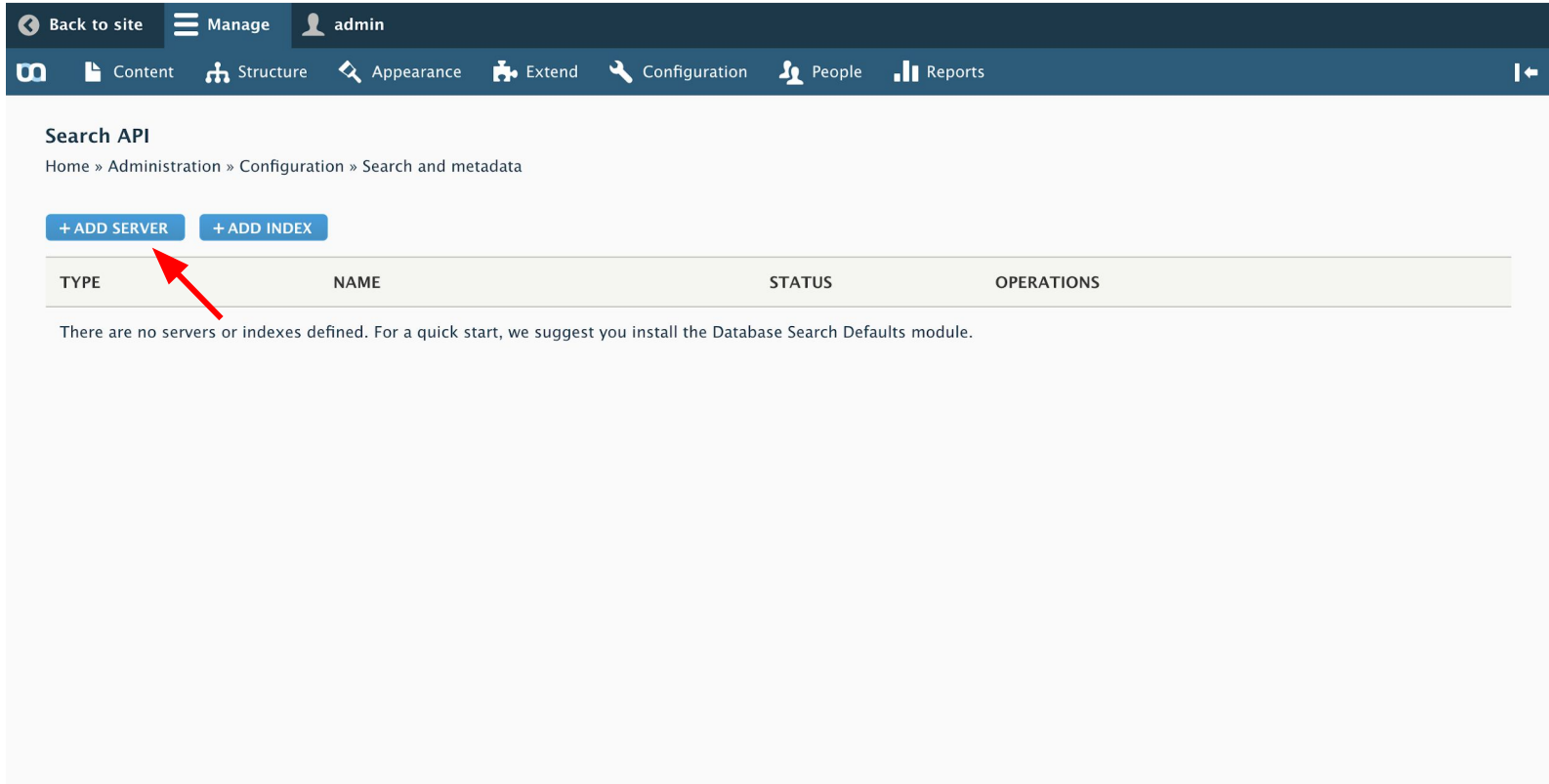
# Walkthrough

<https://github.com/fourkitchens/dcon2018-searchapi-solr>

# Search API server

Configures the connection to the Solr backend





Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

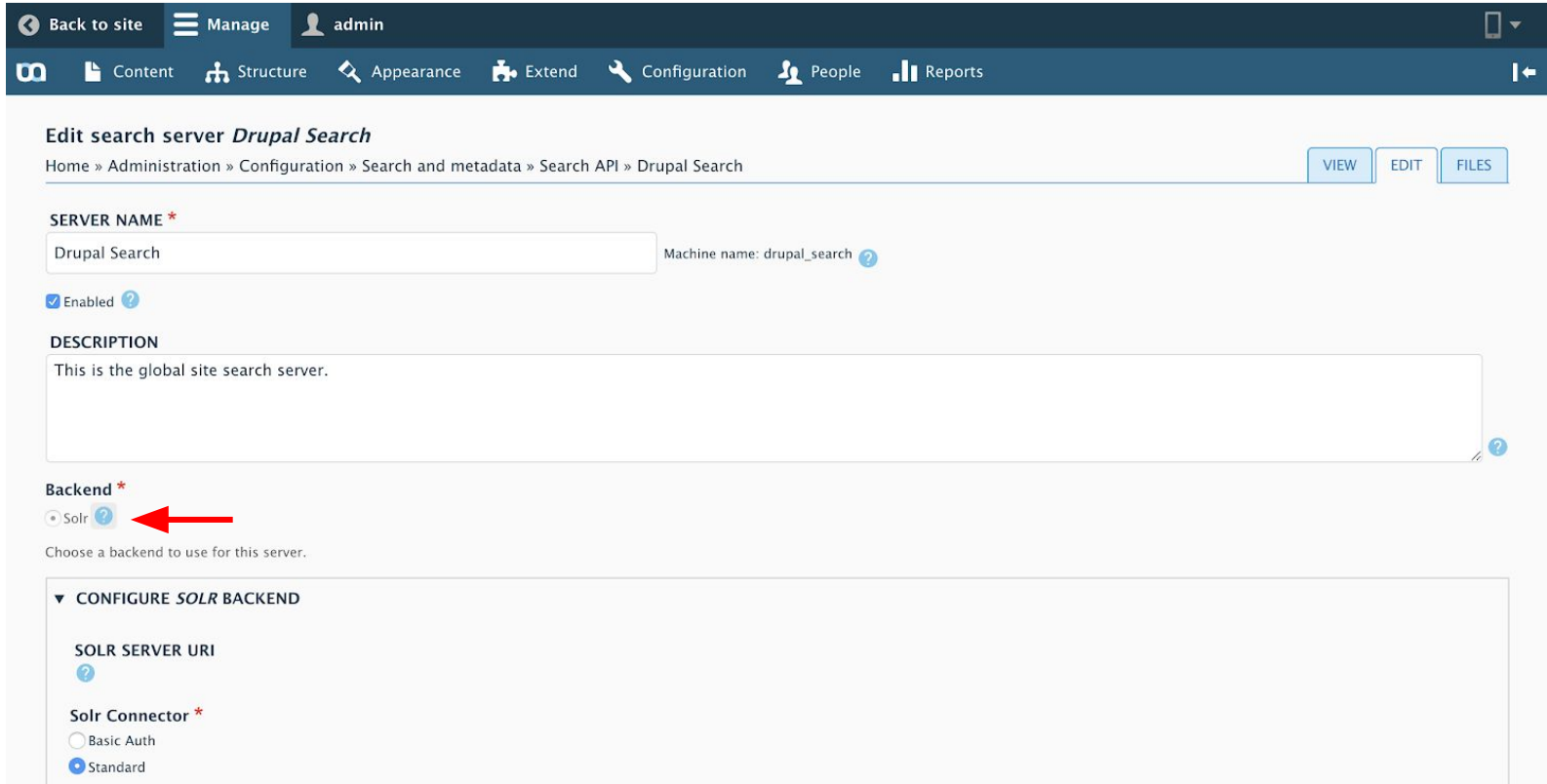
### Search API

Home » Administration » Configuration » Search and metadata

[+ ADD SERVER](#) [+ ADD INDEX](#)

TYPE	NAME	STATUS	OPERATIONS
There are no servers or indexes defined. For a quick start, we suggest you install the Database Search Defaults module.			

Path: /admin/config/search/search-api



The screenshot shows the Drupal administration interface for configuring a search server. The breadcrumb trail is: Home » Administration » Configuration » Search and metadata » Search API » Drupal Search. The page title is "Edit search server *Drupal Search*".

At the top right, there are buttons for "VIEW", "EDIT", and "FILES".

The "SERVER NAME \*" field contains "Drupal Search" and "Machine name: drupal\_search".

The "Enabled" checkbox is checked.

The "DESCRIPTION" field contains the text: "This is the global site search server."

The "Backend \*" section has a radio button selected for "Solr", which is highlighted by a red arrow. Below this, it says "Choose a backend to use for this server."

Under the "CONFIGURE SOLR BACKEND" section, there is a "SOLR SERVER URI" field and a "Solr Connector \*" section with two options: "Basic Auth" (unselected) and "Standard" (selected).


Path: /admin/config/search/search-api/add-server

▼ CONFIGURE SOLR BACKEND

SOLR SERVER URI ?

Solr Connector \*


Basic Auth

Standard 

Choose a connector to use for this Solr server.

▼ CONFIGURE STANDARD SOLR CONNECTOR ?

HTTP PROTOCOL

http ? 

SOLR HOST \*

?

SOLR PORT \*

?

SOLR PATH

?

SOLR CORE

?

QUERY TIMEOUT \*

Path: /admin/config/search/search-api/add-server

**QUERY TIMEOUT \***

 ?

**INDEX TIMEOUT \***

 ?

**OPTIMIZE TIMEOUT \***

 ?

**COMMIT WITHIN \***

 ?

**CONNECTOR WORKAROUNDS**

**SOLR VERSION OVERRIDE**

 ?

**HTTP METHOD**

 ?

**ADVANCED**

Retrieve result data from Solr ?

Return an excerpt for all results ?

Path: /admin/config/search/search-api/add-server

Determine automatically ?

**HTTP METHOD**

AUTO ?

**ADVANCED**

Retrieve result data from Solr ?

Return an excerpt for all results ?

Skip schema verification ?

**MULTI-SITE COMPATIBILITY**

Retrieve results for this site only ?

By default a single Solr backend based Search API server is able to index the data of multiple Drupal sites. But this is an expert-only and dangerous feature that mainly exists for backward compatibility. If you really index multiple sites in one index and don't activate 'Retrieve results for this site only' below you have to ensure that you enable 'Retrieve result data from Solr'! Otherwise it could lead to any kind of errors!

**SAVE** [DELETE](#)

Path: /admin/config/search/search-api/add-server

## Drupal Search

Home » Administration » Configuration » Search and metadata » Search API

[VIEW](#)[EDIT](#)[FILES](#)

This is the global site search server.

Status	enabled (disable)
Backend class	Solr
Search indexes	<a href="#">Drupal Search</a>
Solr connector plugin	Standard
Solr server URI	<a href="http://solrindex:8983/solr/">http://solrindex:8983/solr/</a>
Solr core URI	<a href="http://solrindex:8983/solr/#/collection1">http://solrindex:8983/solr/#/collection1</a>
Server Connection	The Solr server could be reached.
Core Connection	The Solr core could be accessed (latency: 2.4798379669189 ms).
Configured Solr Version	6.6.3
Detected Solr Version	6.6.3
Indexed	12 items (74.89 KB on disk)
Delay	2 min before updates are processed.
Schema	drupal-5.5-solr-6.x
Solr Core Name	collection1

Path: /admin/config/search/search-api/server/<server\_name>

# Search API index

Defines the content that will be searchable



Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

### Search API

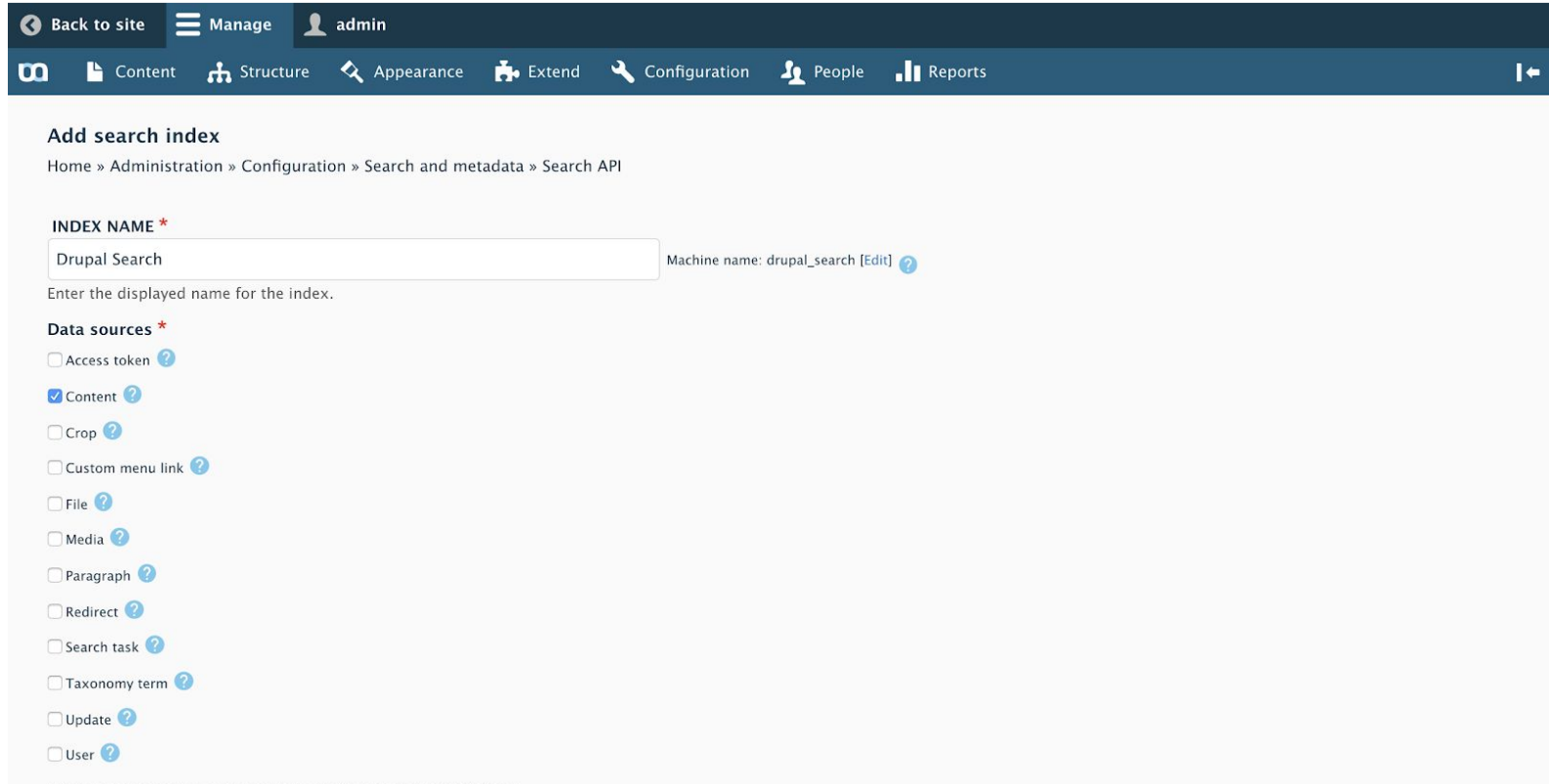
Home » Administration » Configuration » Search and metadata

+ ADD SERVER + ADD INDEX

TYPE	NAME	STATUS	OPERATIONS
Server	<b>Drupal Search</b> This is the global site search server.	✓	Edit ▾

Path: /admin/config/search/search-api







The screenshot shows the Drupal administration interface for adding a search index. The breadcrumb trail is: Home » Administration » Configuration » Search and metadata » Search API. The main heading is "Add search index". Below it, the current path is shown: Home » Administration » Configuration » Search and metadata » Search API. The "INDEX NAME \*" field contains "Drupal Search" and has a "Machine name: drupal\_search [Edit] ?" label. A note below the field says "Enter the displayed name for the index." Under the "Data sources \*" section, there is a list of checkboxes: "Access token ?" (unchecked), "Content ?" (checked), "Crop ?" (unchecked), "Custom menu link ?" (unchecked), "File ?" (unchecked), "Media ?" (unchecked), "Paragraph ?" (unchecked), "Redirect ?" (unchecked), "Search task ?" (unchecked), "Taxonomy term ?" (unchecked), "Update ?" (unchecked), and "User ?" (unchecked).

Path: /admin/config/search/search-api/add-index

**Data sources \***

- Access token ?
- Content ? 
- Crop ?
- Custom menu link ?
- File ?
- Media ?
- Paragraph ?
- Redirect ?
- Search task ?
- Taxonomy term ?
- Update ?
- User ?

Select one or more data sources of items that will be stored in this index.

 Please configure the used datasources.

▼ **CONFIGURE THE *CONTENT* DATASOURCE**

▼ **BUNDLES**

**Which bundles should be indexed?**

- Only those selected
- All except those selected

Path: /admin/config/search/search-api/add-index

▼ CONFIGURE THE *CONTENT* DATASOURCE

▼ BUNDLES

**Which bundles should be indexed?**

Only those selected

All except those selected

**Bundles**

Article

Page

▼ LANGUAGES

**Which languages should be indexed?**

Only those selected

All except those selected

**Languages**

English

▼ CONFIGURE THE *DEFAULT* TRACKER ?

**Indexing order**


Index items in the same order in which they were saved

Index the most recent items first

The order in which items will be indexed.

▼ CONFIGURE THE *DEFAULT TRACKER* ?

**Indexing order**


Index items in the same order in which they were saved 

Index the most recent items first


The order in which items will be indexed.

**Server**

- No server -

Drupal Search 

Select the server this index should use. Indexes cannot be enabled without a connection to a valid, enabled server.


Enabled ? 

**DESCRIPTION**

?

▼ INDEX OPTIONS

Read only ?

Index items immediately ? 

**CRON BATCH SIZE**

50 ?

Path: /admin/config/search/search-api/add-index

# Index fields

Define the fields that are indexed



Back to site | Manage | admin

Content | Structure | Appearance | Extend | Configuration | People | Reports

## Manage fields for search index *Drupal Search*

Home » Administration » Configuration » Search and metadata » Search API » Drupal Search

VIEW | EDIT | **FIELDS** | PROCESSORS

**+ ADD FIELDS**

The data type of a field determines how it can be used for searching and filtering. The boost is used to give additional weight to certain fields, for example titles or tags.

For information about the data types available for indexing, see the [data types table](#) at the bottom of the page.

**GENERAL**

LABEL	MACHINE NAME	PROPERTY PATH	TYPE	BOOST	OPERATIONS
<input type="text" value="Article Content"/>	<input type="text" value="article_content"/>	rendered_item	Fulltext	1.0	<a href="#">Edit</a> <a href="#">Remove</a>

**CONTENT**

LABEL	MACHINE NAME	PROPERTY PATH	TYPE	BOOST	OPERATIONS
<input type="text" value="Body"/>	<input type="text" value="body"/>	body	Fulltext	1.0	<a href="#">Remove</a>
<input type="text" value="Title"/>	<input type="text" value="title"/>	title	Fulltext	1.0	<a href="#">Remove</a>

Path: /admin/config/search/search-api/index/<search\_index>/fields

▼ CONTENT

LABEL	MACHINE NAME	PROPERTY PATH	TYPE	BOOST	OPERATIONS
<input type="text" value="Body"/>	<input type="text" value="body"/>	body	<input type="text" value="Fulltext"/>	<input type="text" value="1"/> ←	<a href="#">Remove</a>
<input type="text" value="Title"/>	<input type="text" value="title"/>	title	<input type="text" value="Fulltext"/>	<input type="text" value="5.0"/> ←	
<input type="text" value="status"/>	<input type="text" value="status"/>	status	<input type="text" value="Boolean"/>		
<input type="text" value="uid"/>	<input type="text" value="uid"/>	uid	<input type="text" value="Integer"/>		
<input type="text" value="Content type"/>	<input type="text" value="type"/>	type	<input type="text" value="String"/>		<a href="#">Remove</a>
<input type="text" value="Channel"/>	<input type="text" value="channel"/>	field_channel	<input type="text" value="Integer"/>	←	<a href="#">Remove</a>
<input type="text" value="Authored on"/>	<input type="text" value="created"/>	created	<input type="text" value="Date"/>		<a href="#">Remove</a>

▶ DATA TYPES ←

[SAVE CHANGES](#)

Path: /admin/config/search/search-api/index/<search\_index>/fields

Back to site | Manage | admin

Content | Structure | Appearance | Extend | Configuration | People | Reports

## Manage fields for search index *Drupal Search*

Home » Administration » Configuration » Search and metadata » Search API » Drupal Search

VIEW | EDIT | **FIELDS** | PROCESSORS

**+ ADD FIELDS**

The data type of a field determines how it can be used for searching and filtering. The boost is used to give additional weight to certain fields, for example titles or tags.

For information about the data types available for indexing, see the [data types table](#) at the bottom of the page.

▼ GENERAL

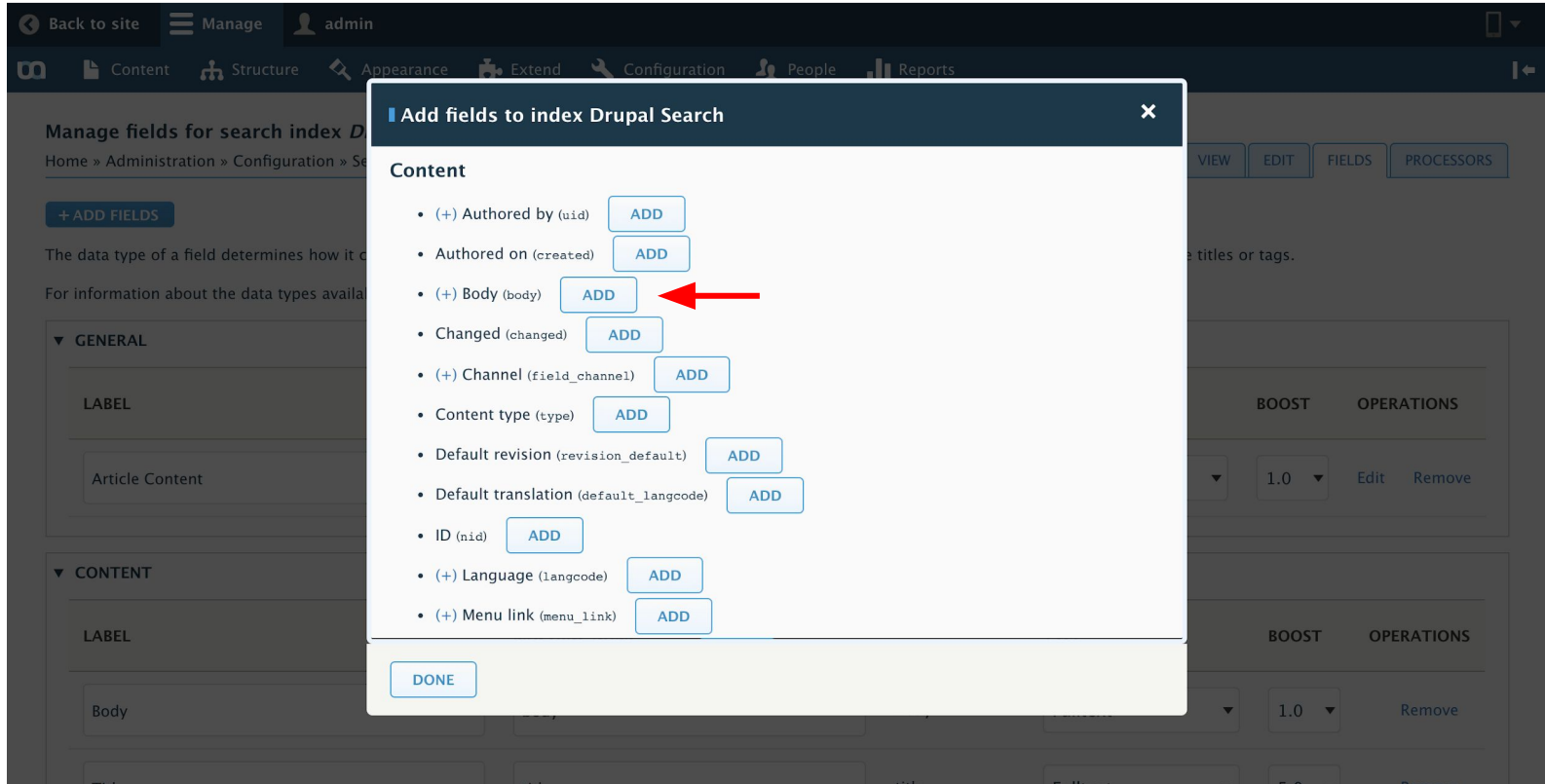
LABEL	MACHINE NAME	PROPERTY PATH	TYPE	BOOST	OPERATIONS
Article Content	article_content	rendered_item	Fulltext	1.0	Edit Remove

▼ CONTENT

LABEL	MACHINE NAME	PROPERTY PATH	TYPE	BOOST	OPERATIONS
Body	body	body	Fulltext	1.0	Remove
Title	title	title	Fulltext	1.0	Remove

Path: /admin/config/search/search-api/index/<search\_index>/fields






The screenshot shows the Drupal administration interface for managing search index fields. A modal dialog titled "Add fields to index Drupal Search" is open, listing various content fields with "ADD" buttons. A red arrow points to the "ADD" button for the "Body (body)" field.

**Add fields to index Drupal Search**

**Content**

- (+) Authored by (uid)
- Authored on (created)
- (+) Body (body)  
- Changed (changed)
- (+) Channel (field\_channel)
- Content type (type)
- Default revision (revision\_default)
- Default translation (default\_langcode)
- ID (nid)
- (+) Language (langcode)
- (+) Menu link (menu\_link)

Path: /admin/config/search/search-api/index/<search\_index>/fields

# Indexing Paragraphs

A strategy...



Back to site **Manage** admin

Content Structure Appearance Extend Configuration People Reports

**Manage display**

Home » Administration » Structure » Content types » Article » Manage display

EDIT MANAGE FIELDS MANAGE FORM DISPLAY MANAGE DISPLAY

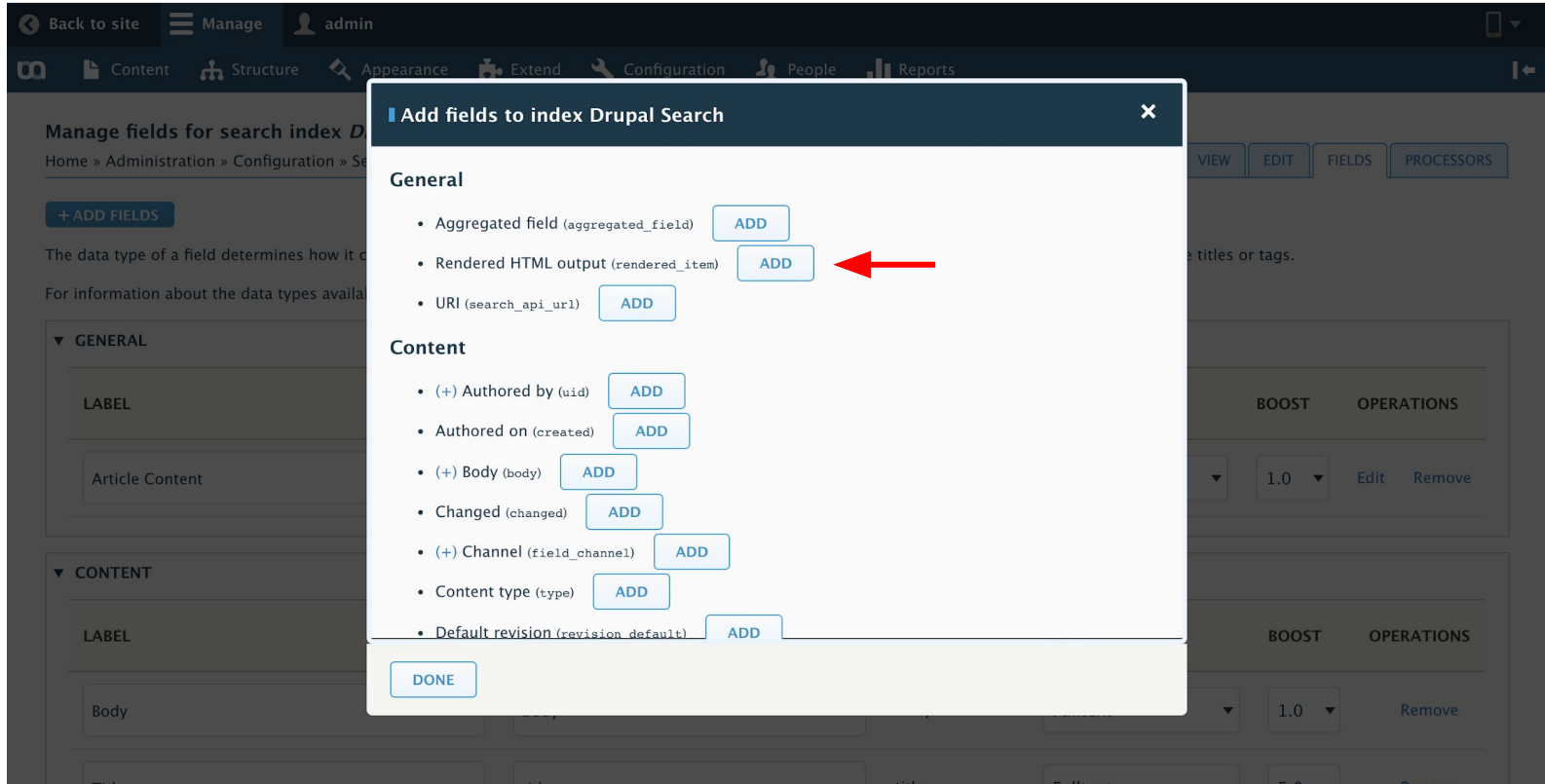
DEFAULT SEARCH INDEX TEASER

+ ADD GROUP

Show row weights

FIELD	LABEL	FORMAT	
Paragrpahs	- Hidden -	Rendered entity	Rendered as Default
Tags	- Hidden -	Label	Link to the referenced entity
<b>Disabled</b>			
Language	Above	Language	
Channel	Above	RSS category	
Meta Tags	Above	Empty formatter	
RSS Title	Above	Rendered entity	

Path: /admin/structure/types/manage/<type>/display/search\_index



**Add fields to index Drupal Search**

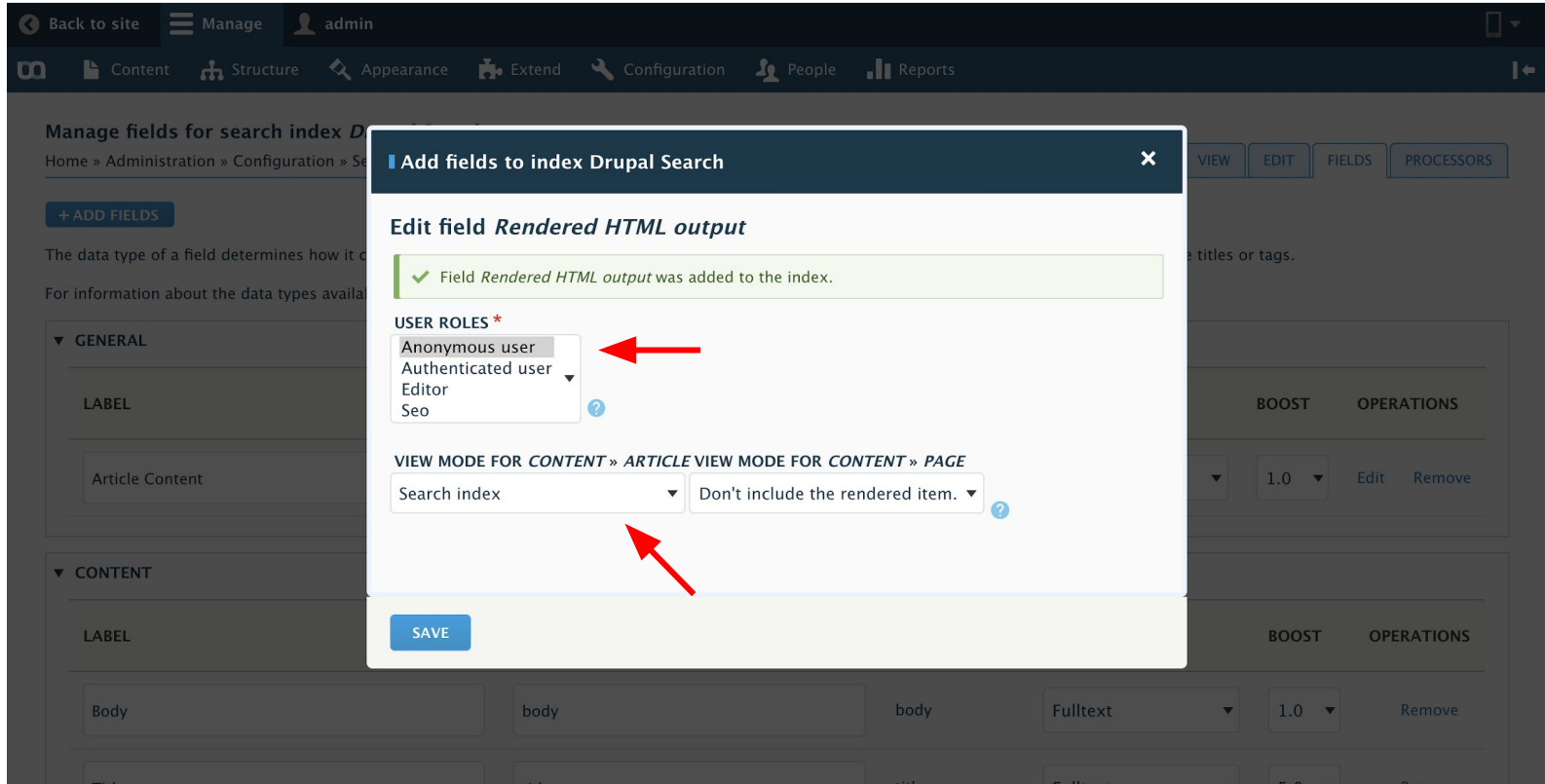
**General**

- Aggregated field (aggregated\_field)
- Rendered HTML output (rendered\_item)
- URI (search\_api\_url)

**Content**

- (+) Authored by (uid)
- Authored on (created)
- (+) Body (body)
- Changed (changed)
- (+) Channel (field\_channel)
- Content type (type)
- Default revision (revision\_default)

Path: /admin/config/search/search-api/index/<search\_index>/fields



Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

Manage fields for search index *D*

Home » Administration » Configuration » Search API » Search API Indexes » *D*

+ ADD FIELDS

The data type of a field determines how it is rendered. For information about the data types available, see the [Data types](#) page.

GENERAL

LABEL

Article Content

CONTENT

LABEL

Body

body

body

Fulltext

1.0

Remove

VIEW EDIT FIELDS PROCESSORS

titles or tags.

BOOST OPERATIONS

1.0 Edit Remove

BOOST OPERATIONS

1.0 Remove

**Add fields to index Drupal Search**

✓ Field *Rendered HTML output* was added to the index.

**USER ROLES \***

Anonymous user  
Authenticated user  
Editor  
Seo

**VIEW MODE FOR *CONTENT* » *ARTICLE* VIEW MODE FOR *CONTENT* » *PAGE***

Search index Don't include the rendered item.

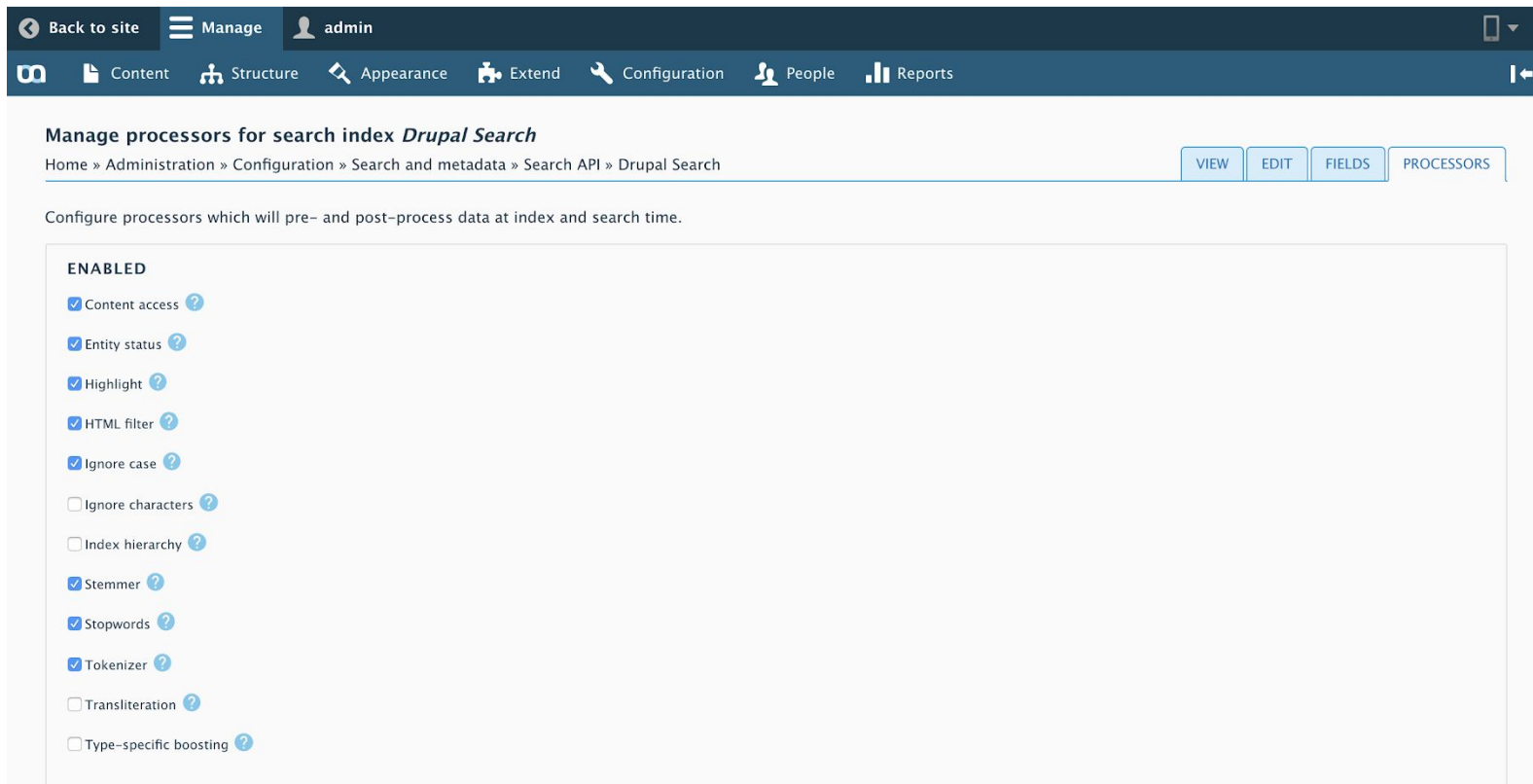
SAVE

Path: /admin/config/search/search-api/index/<search\_index>/fields

# Processors

Configure how indexed content is manipulated during indexing and retrieval





The screenshot shows the Drupal administration interface for configuring search API processors. The breadcrumb trail is: Home » Administration » Configuration » Search and metadata » Search API » Drupal Search. The 'PROCESSORS' tab is selected. Below the breadcrumb, there is a heading 'Manage processors for search index *Drupal Search*' and a sub-heading 'Configure processors which will pre- and post-process data at index and search time.' A list of processors is shown under the 'ENABLED' section, each with a checkbox and a help icon.

Back to site | Manage | admin

Content | Structure | Appearance | Extend | Configuration | People | Reports

Home » Administration » Configuration » Search and metadata » Search API » Drupal Search

VIEW | EDIT | FIELDS | PROCESSORS

Manage processors for search index *Drupal Search*

Configure processors which will pre- and post-process data at index and search time.

**ENABLED**

- Content access ?
- Entity status ?
- Highlight ?
- HTML filter ?
- Ignore case ?
- Ignore characters ?
- Index hierarchy ?
- Stemmer ?
- Stopwords ?
- Tokenizer ?
- Transliteration ?
- Type-specific boosting ?

Path: /admin/config/search/search-api/index/<search\_index>/processors

**PROCESSOR ORDER**

<b>PREPROCESS INDEX</b> <a href="#">Show row weights</a> <ul style="list-style-type: none"><li>✚ Ignore case</li><li>✚ HTML filter</li><li>✚ Tokenizer</li><li>✚ Stopwords</li><li>✚ Stemmer</li></ul>	<b>PREPROCESS QUERY</b> <a href="#">Show row weights</a> <ul style="list-style-type: none"><li>✚ Content access</li><li>✚ Ignore case</li><li>✚ HTML filter</li><li>✚ Tokenizer</li><li>✚ Stopwords</li><li>✚ Stemmer</li></ul>	<b>POSTPROCESS QUERY</b> <a href="#">Show row weights</a> <ul style="list-style-type: none"><li>✚ Highlight</li></ul>
--	---	---

**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<b>HIGHLIGHT RETURNED FIELD DATA</b> <div>Always <span>?</span></div> <input type="checkbox"/> Highlight partial matches <span>?</span> <input checked="" type="checkbox"/> Create excerpt <span>?</span>
<b>HTML filter</b> Enabled	
<b>Ignore case</b> Enabled	
<b>Stemmer</b> Enabled	
	<b>EXCERPT LENGTH</b>

Path: /admin/config/search/search-api/index/<search\_index>/processors



**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<b>HIGHLIGHT RETURNED FIELD DATA</b> Always <span>?</span>
<b>HTML filter</b> Enabled	<input type="checkbox"/> Highlight partial matches <span>?</span>
<b>Ignore case</b> Enabled	<input checked="" type="checkbox"/> Create excerpt <span>?</span>
<b>Stemmer</b> Enabled	<b>EXCERPT LENGTH</b> 256 <span>?</span>
<b>Stopwords</b> Enabled	<b>Exclude fields from excerpt</b> <input type="checkbox"/> Article Content (article_content) <input type="checkbox"/> Body (body) <input checked="" type="checkbox"/> Title (title)
<b>Tokenizer</b> Enabled	Exclude certain fulltext fields from being included in the excerpt.
	<b>HIGHLIGHTING PREFIX</b> <strong> <span>?</span>
	<b>HIGHLIGHTING SUFFIX</b> </strong> <span>?</span>

**SAVE**

Path: /admin/config/search/search-api/index/<search\_index>/processors

### PROCESSOR SETTINGS

<b>Highlight</b> Enabled	<input type="checkbox"/> Enable on all supported fields <a href="#">?</a>
<b>HTML filter</b> Enabled	<b>Enable this processor on the following fields</b> <input checked="" type="checkbox"/> Article Content <input checked="" type="checkbox"/> Content » Body <input checked="" type="checkbox"/> Content » Title <input type="checkbox"/> Content » Content type
<b>Ignore case</b> Enabled	<p>Note: The Search API currently doesn't support per-field keywords processing, so this setting will be ignored when preprocessing search keywords. It is therefore usually recommended that you enable the processor for all fields that you intend to use as fulltext search fields, to avoid undesired consequences.</p>
<b>Stemmer</b> Enabled	<input checked="" type="checkbox"/> Index title attribute <a href="#">?</a> If set, the contents of title attributes will be indexed.
<b>Stopwords</b> Enabled	<input checked="" type="checkbox"/> Index alt attribute <a href="#">?</a> If set, the alternative text of images will be indexed.
<b>Tokenizer</b> Enabled	<b>TAG BOOSTS</b> <input type="text" value="h1: 5&lt;br/&gt;h2: 3&lt;br/&gt;h3: 2&lt;br/&gt;strong: 2&lt;br/&gt;b: 2"/> <a href="#">?</a>

**SAVE**

**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<input type="checkbox"/> Enable on all supported fields <a href="#">?</a>  <b>Enable this processor on the following fields</b> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Article Content</li><li><input checked="" type="checkbox"/> Content » Body</li><li><input checked="" type="checkbox"/> Content » Title</li><li><input type="checkbox"/> Content » Content type</li></ul> <p>Note: The Search API currently doesn't support per-field keywords processing, so this setting will be ignored when preprocessing search keywords. It is therefore usually recommended that you enable the processor for all fields that you intend to use as fulltext search fields, to avoid undesired consequences.</p>
<b>HTML filter</b> Enabled	
<b>Ignore case</b> Enabled	
<b>Stemmer</b> Enabled	
<b>Stopwords</b> Enabled	
<b>Tokenizer</b> Enabled	

**SAVE**

**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<input type="checkbox"/> Enable on all supported fields <a href="#">?</a>
<b>HTML filter</b> Enabled	<b>Enable this processor on the following fields</b>
<b>Ignore case</b> Enabled	<input checked="" type="checkbox"/> Article Content
<b>Stemmer</b> Enabled	<input checked="" type="checkbox"/> Content » Body
<b>Stopwords</b> Enabled	<input checked="" type="checkbox"/> Content » Title
<b>Tokenizer</b> Enabled	

Note: The Search API currently doesn't support per-field keywords processing, so this setting will be ignored when preprocessing search keywords. It is therefore usually recommended that you enable the processor for all fields that you intend to use as fulltext search fields, to avoid undesired consequences.

**EXCEPTIONS**

```
texan=texa
mexican=mexic
```

[?](#)

**SAVE**

**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<input type="checkbox"/> Enable on all supported fields <a href="#">?</a>
<b>HTML filter</b> Enabled	<b>Enable this processor on the following fields</b> <input checked="" type="checkbox"/> Article Content <input checked="" type="checkbox"/> Content » Body <input checked="" type="checkbox"/> Content » Title
<b>Ignore case</b> Enabled	Note: The Search API currently doesn't support per-field keywords processing, so this setting will be ignored when preprocessing search keywords. It is therefore usually recommended that you enable the processor for all fields that you intend to use as fulltext search fields, to avoid undesired consequences.
<b>Stemmer</b> Enabled	<b>STOPWORDS</b> <input type="text" value="a&lt;br/&gt;an&lt;br/&gt;and&lt;br/&gt;are&lt;br/&gt;as"/> <a href="#">?</a>
<b>Stopwords</b> Enabled	
<b>Tokenizer</b> Enabled	

**SAVE**

**PROCESSOR SETTINGS**

<b>Highlight</b> Enabled	<input type="checkbox"/> Enable on all supported fields <a href="#">?</a>
<b>HTML filter</b> Enabled	<b>Enable this processor on the following fields</b> <input checked="" type="checkbox"/> Article Content <input checked="" type="checkbox"/> Content » Body <input checked="" type="checkbox"/> Content » Title
<b>Ignore case</b> Enabled	Note: The Search API currently doesn't support per-field keywords processing, so this setting will be ignored when preprocessing search keywords. It is therefore usually recommended that you enable the processor for all fields that you intend to use as fulltext search fields, to avoid undesired consequences.
<b>Stemmer</b> Enabled	<b>WHITESPACE CHARACTERS</b> <input type="text"/> <a href="#">?</a>
<b>Stopwords</b> Enabled	<input checked="" type="checkbox"/> Simple CJK handling <a href="#">?</a>
<b>Tokenizer</b> Enabled	<b>MINIMUM WORD LENGTH TO INDEX</b> <input type="text" value="3"/> <a href="#">?</a>

**SAVE**

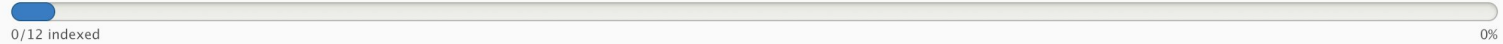
## Drupal Search

Home » Administration » Configuration » Search and metadata » Search API

[VIEW](#)[EDIT](#)[FIELDS](#)[PROCESSORS](#)

This is the global site search server index.

### Index status



Status	enabled ( <a href="#">disable</a> )
Datasource	Content (0/12 indexed)
Tracker	Default
Server	<a href="#">Drupal Search</a>
Server index status	There are 0 items indexed on the server for this index. ( <a href="#">More information</a> )
Cron batch size	During cron runs, 50 items will be indexed per batch.

#### ▼ START INDEXING NOW

Index

items in batches of

items

[INDEX NOW](#)[QUEUE ALL ITEMS FOR REINDEXING](#)[CLEAR ALL INDEXED DATA](#)[REBUILD TRACKING INFORMATION](#)

Path: /admin/config/search/search-api/index/<index\_name>

# Search results view

Renders the search page and form





Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

### Add view


Home » Administration » Structure » Views

**VIEW BASIC INFORMATION**

**VIEW NAME \***  
Search Results Machine name: search\_results [Edit]

Description

**VIEW SETTINGS**

SHOW: Index Drupal Search SORTED BY: Unsorted 

**PAGE SETTINGS**

Create a page

**PAGE TITLE**  
Search Results

**PATH**  
search-results

Path: /admin/structure/views/add


**PAGE SETTINGS**

Create a page

PAGE TITLE

PATH

**PAGE DISPLAY SETTINGS**

DISPLAY FORMAT:  OF:  

ITEMS TO DISPLAY

Use a pager

Create a menu link

Include an RSS feed

**BLOCK SETTINGS**

Create a block

Path: /admin/structure/views/add

**Search (Index Drupal Search)**  
Home » Administration » Structure » Views

### Displays



PAGE [+ ADD](#) Edit view name/description ▾

Display name: Page View Page ▾

**TITLE**  
Title: Search Results

**FORMAT**  
Format: Unformatted list | Settings  
Show: Fields | Settings

**FIELDS** [Add ▾](#)

- Content datasource: Title
- Content datasource: Paragraphs [hidden] 
- Content datasource: Body [hidden] 
- Search: Excerpt

**FILTER CRITERIA** [Add ▾](#)

Search: Fulltext search (or )

**SORT CRITERIA** [Add ▾](#)

Search: Relevance (desc)

**PAGE SETTINGS**

Path: /search

Menu: No menu

Access: None

**HEADER** [Add](#)

**FOOTER** [Add](#)

**NO RESULTS BEHAVIOR** [Add](#)

More link: No

**ADVANCED**

[SAVE](#) [CANCEL](#)

Default text when no excerpt returned

**Search (Index Drupal Search)**  
Home » Administration » Structure » Views

### Displays

PAGE [+ ADD](#) Edit view name/description ▾

Display name: Page View Page ▾

**TITLE**  
Title: Search Results


**FORMAT**  
Format: Unformatted list | Settings  
Show: Fields | Settings

**FIELDS** [Add ▾](#)

Content datasource: Title

Content datasource: Paragraphs [hidden]

Content datasource: Body [hidden]

Search: Excerpt 

**FILTER CRITERIA** [Add ▾](#)

Search: Fulltext search (or )

**SORT CRITERIA** [Add ▾](#)

Search: Relevance (desc)

**PAGE SETTINGS**

Path: /search

Menu: No menu

Access: None

**HEADER** [Add](#)

**FOOTER** [Add](#)

**NO RESULTS BEHAVIOR** [Add](#)

**PAGER**

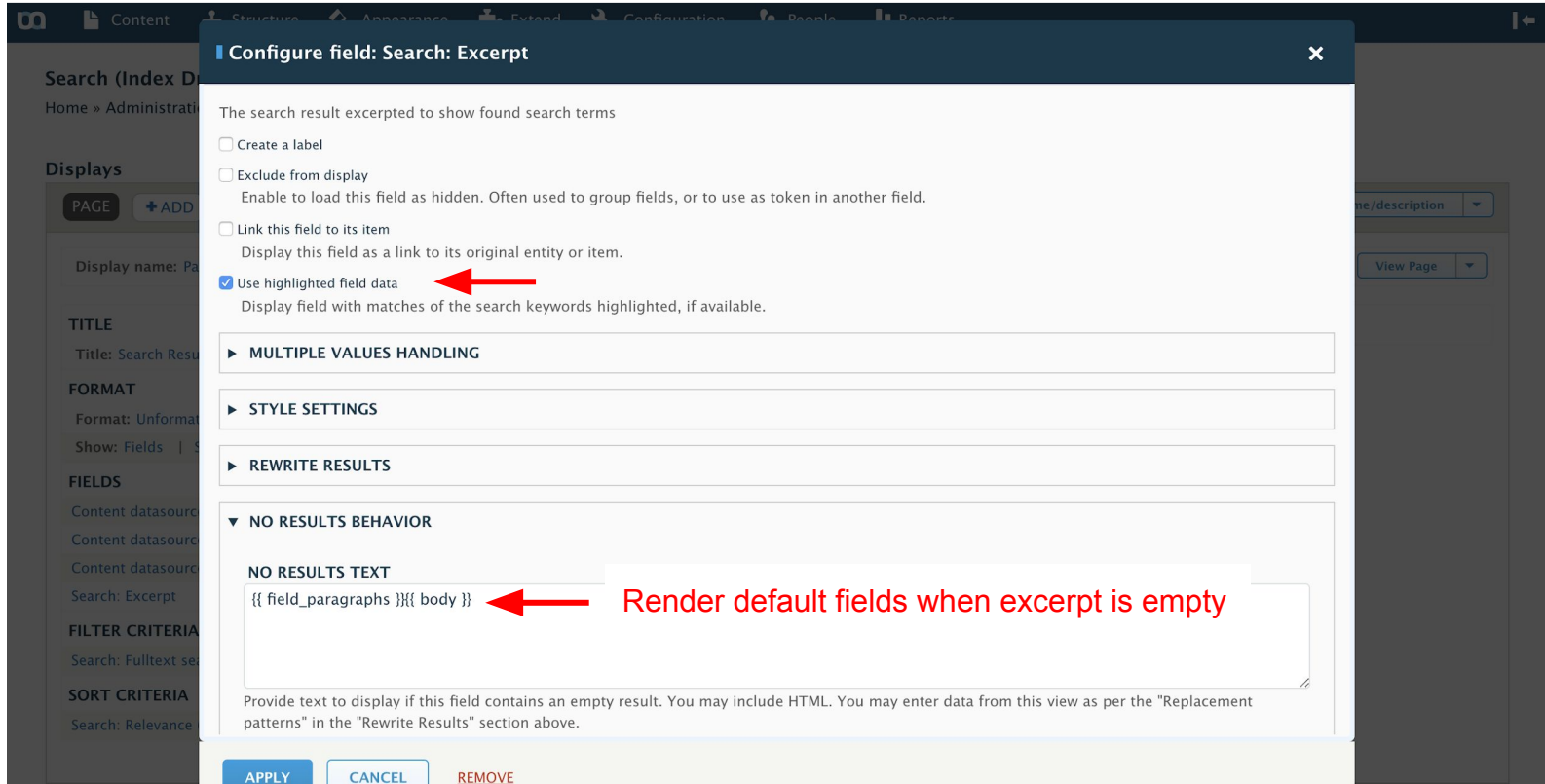
Use pager: Mini | Mini pager, 10 items

More link: No



**▶ ADVANCED**

[SAVE](#) [CANCEL](#)

Path: /admin/structure/views/view/<view\_name>



The screenshot shows the 'Configure field: Search: Excerpt' dialog box in Drupal. The dialog has a dark header with a close button (X) on the right. The main content area is white and contains several sections of configuration options:

- The search result excerpted to show found search terms**
  - Create a label
  - Exclude from display
    - Enable to load this field as hidden. Often used to group fields, or to use as token in another field.
  - Link this field to its item
    - Display this field as a link to its original entity or item.
  - Use highlighted field data 
    - Display field with matches of the search keywords highlighted, if available.
- MULTIPLE VALUES HANDLING** (collapsible section)
- STYLE SETTINGS** (collapsible section)
- REWRITE RESULTS** (collapsible section)
- NO RESULTS BEHAVIOR** (expanded section)
  - NO RESULTS TEXT**
    - Text area containing the placeholder: `{{ field_paragraphs }}{{ body }}`  **Render default fields when excerpt is empty**
  - Provide text to display if this field contains an empty result. You may include HTML. You may enter data from this view as per the "Replacement patterns" in the "Rewrite Results" section above.

At the bottom of the dialog, there are three buttons: **APPLY** (blue), **CANCEL** (white), and **REMOVE** (red).

Path: /admin/structure/views/view/<view\_name>

## Search (Index Drupal Search)

Home » Administration » Structure » Views

## Displays


PAGE [+ ADD](#) Edit view name/description ▾

Display name: Page View Page ▾

**TITLE**  
Title: Search Results

**FORMAT**  
Format: Unformatted list | Settings  
Show: Fields | Settings

**FIELDS** [Add ▾](#)  
Content datasource: Title  
Content datasource: Paragraphs [hidden]  
Content datasource: Body [hidden]  
Search: Excerpt

**FILTER CRITERIA** [Add ▾](#)  
Search: Fulltext search (or) 

**SORT CRITERIA** [Add ▾](#)  
Search: Relevance (desc)

**PAGE SETTINGS**  
Path: /search  
Menu: No menu  
Access: None

**HEADER** [Add](#)

**FOOTER** [Add](#)

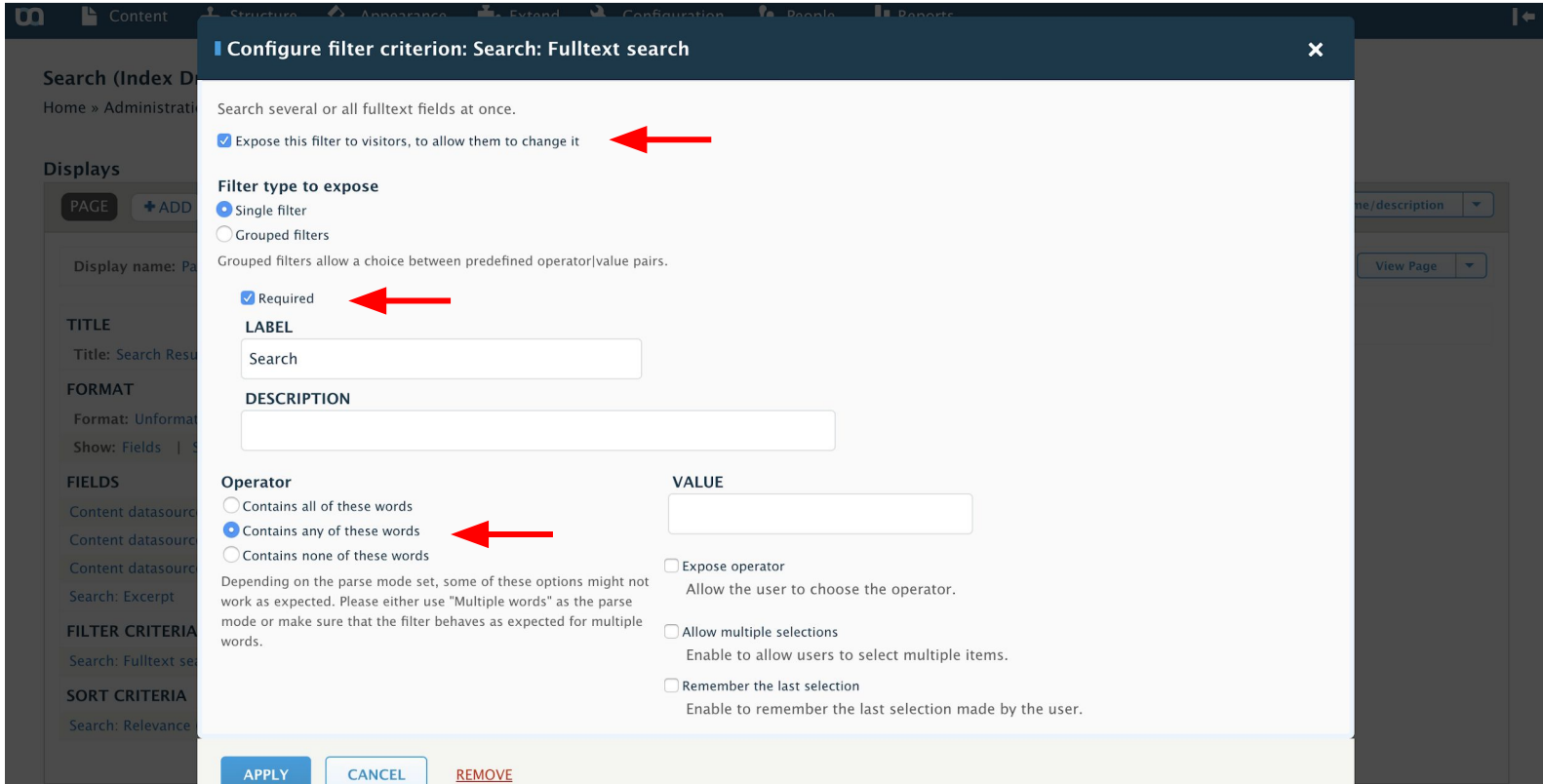
**NO RESULTS BEHAVIOR** [Add](#)

**PAGER**  
Use pager: Mini | Mini pager, 10 items  
More link: No

**▶ ADVANCED**

[SAVE](#) [CANCEL](#)

Path: /admin/structure/views/view/&lt;view\_name&gt;



**Configure filter criterion: Search: Fulltext search**

Search several or all fulltext fields at once.

Expose this filter to visitors, to allow them to change it

**Filter type to expose**

Single filter  
 Grouped filters

Grouped filters allow a choice between predefined operator/value pairs.

Required

**LABEL**

**DESCRIPTION**

**Operator**

Contains all of these words  
 Contains any of these words  
 Contains none of these words

**VALUE**

Expose operator  
Allow the user to choose the operator.

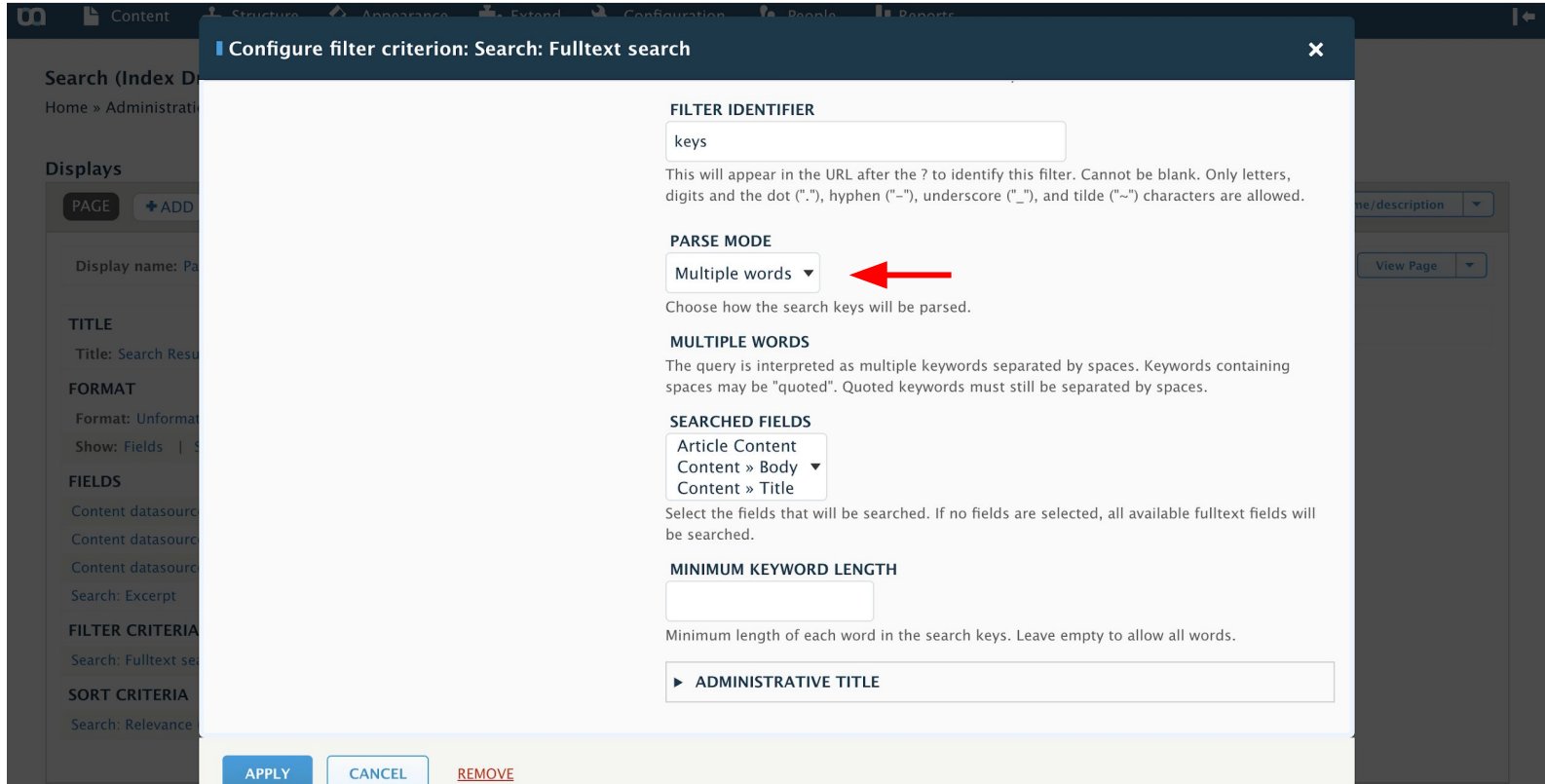
Allow multiple selections  
Enable to allow users to select multiple items.

Remember the last selection  
Enable to remember the last selection made by the user.

Depending on the parse mode set, some of these options might not work as expected. Please either use "Multiple words" as the parse mode or make sure that the filter behaves as expected for multiple words.

**APPLY** **CANCEL** **REMOVE**


Path: /admin/structure/views/view/<view\_name>



**Configure filter criterion: Search: Fulltext search**

**FILTER IDENTIFIER**  
keys

This will appear in the URL after the ? to identify this filter. Cannot be blank. Only letters, digits and the dot ("."), hyphen ("-"), underscore ("\_"), and tilde ("~") characters are allowed.

**PARSE MODE**  
Multiple words ▼ 

Choose how the search keys will be parsed.

**MULTIPLE WORDS**  
The query is interpreted as multiple keywords separated by spaces. Keywords containing spaces may be "quoted". Quoted keywords must still be separated by spaces.

**SEARCHED FIELDS**  
Article Content  
Content » Body ▼  
Content » Title

Select the fields that will be searched. If no fields are selected, all available fulltext fields will be searched.

**MINIMUM KEYWORD LENGTH**

Minimum length of each word in the search keys. Leave empty to allow all words.

▶ ADMINISTRATIVE TITLE

APPLY CANCEL REMOVE

Path: /admin/structure/views/view/<view\_name>




**Search (Index Drupal Search)**  
Home » Administration » Structure » Views

### Displays

PAGE [+ ADD](#) Edit view name/description ▾

Display name: Page View Page ▾

<b>TITLE</b> Title: Search Results	<b>PAGE SETTINGS</b> Path: /search Menu: No menu Access: None	<b>▶ ADVANCED</b>
<b>FORMAT</b> Format: Unformatted list   Settings Show: Fields   Settings	<b>HEADER</b> <a href="#">Add</a>	
<b>FIELDS</b> <a href="#">Add ▾</a> Content datasource: Title Content datasource: Paragraphs [hidden] Content datasource: Body [hidden] Search: Excerpt	<b>FOOTER</b> <a href="#">Add</a>	
<b>FILTER CRITERIA</b> <a href="#">Add ▾</a> Search: Fulltext search (or )	<b>NO RESULTS BEHAVIOR</b> <a href="#">Add</a>	
<b>SORT CRITERIA</b> <a href="#">Add ▾</a> Search: Relevance (desc) 	<b>PAGER</b> Use pager: Mini   Mini pager, 10 items More link: No	
<b>SAVE</b> <b>CANCEL</b>		

Path: /admin/structure/views/view/<view\_name>

# Facets




Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

### Facets

Home » Administration » Configuration » Search and metadata

[+ ADD FACET](#) 

[Show row weights](#)

TYPE	TITLE	OPERATIONS
Facet source	search_api:views_page__search__search	Configure
Facet	Published created - checkbox	<a href="#">Edit</a> ▼
Facet	Type type - checkbox	<a href="#">Edit</a> ▼

[SAVE](#)

Path: /admin/config/search/facets

Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

### Add facet

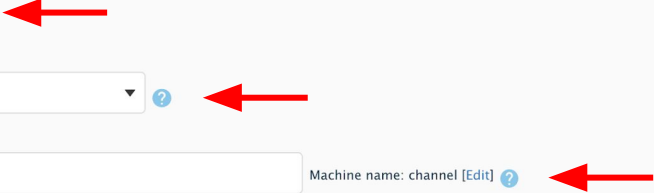
Home » Administration » Configuration » Search and metadata » Facets

**FACET SOURCE \***  
View Search, display Page ?

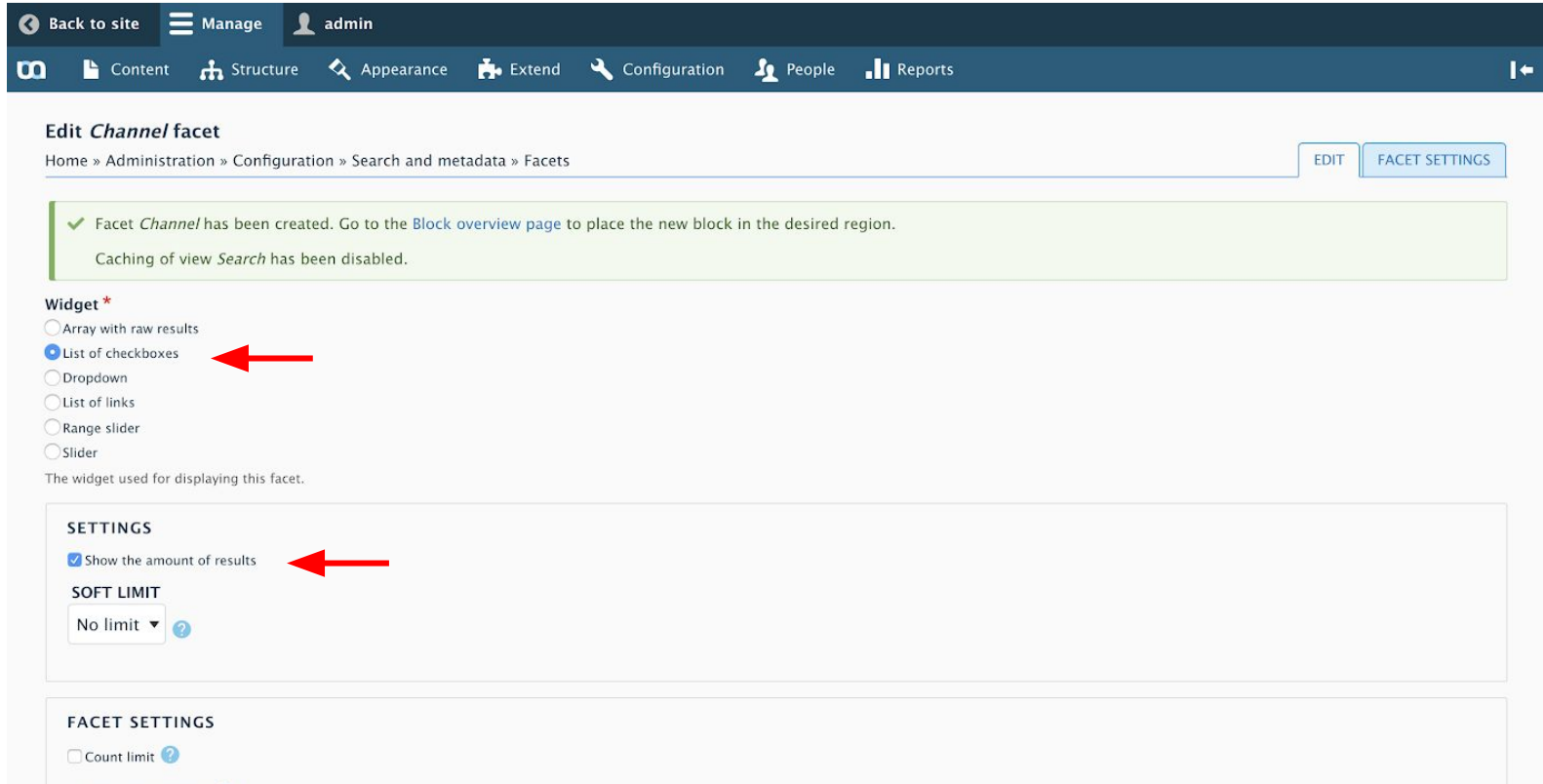
**FIELD \***  
Channel (field\_channel) ?

**NAME \***  
Channel Machine name: channel [Edit] ?

SAVE



Path: admin/config/search/facets/add-facet



The screenshot shows the Drupal administration interface for editing a Channel facet. The breadcrumb trail is: Home » Administration » Configuration » Search and metadata » Facets. There are two buttons: EDIT and FACET SETTINGS. A green message box states: "Facet Channel has been created. Go to the Block overview page to place the new block in the desired region. Caching of view Search has been disabled." The "Widget" section has a red arrow pointing to the "List of checkboxes" option. The "SETTINGS" section has a red arrow pointing to the "Show the amount of results" checkbox. The "SOFT LIMIT" section has a dropdown menu set to "No limit". The "FACET SETTINGS" section has a checkbox for "Count limit".

Back to site Manage admin

Content Structure Appearance Extend Configuration People Reports

### Edit Channel facet

Home » Administration » Configuration » Search and metadata » Facets

EDIT FACET SETTINGS

✓ Facet Channel has been created. Go to the [Block overview page](#) to place the new block in the desired region.  
Caching of view Search has been disabled.

**Widget \***

- Array with raw results
- List of checkboxes
- Dropdown
- List of links
- Range slider
- Slider

The widget used for displaying this facet.

**SETTINGS**

- Show the amount of results

**SOFT LIMIT**



No limit

**FACET SETTINGS**

- Count limit

Path: /admin/config/search/facets/<facet>/edit

**FACET SETTINGS**



- Count limit ?
- Date item processor ?
- Dependent facet ? 
- Exclude specified items ?
- Granularity item processor ?
- Hide active items ?
- Hide facet with 1 result ?
- Hide non-narrowing results ?
- List item label ?
- Range slider ?
- Show only deepest item levels ?
- Slider ?
- Transform entity ID to label ? 
- URL handler ?
- Hide facet when facet source is not rendered ?
- Ensure that only one result can be displayed ?


**URL ALIAS \***

 ?




Priority facet behavior \*


Path: /admin/config/search/facets/<facet>/edit


**URL ALIAS \***  
channel  


**Empty facet behavior \***  
 Do not display facet   
 Display text  
Take this action if a facet has no items.

**Operator**  
 OR  
 AND  
AND filters are exclusive and narrow the result set. OR filters are inclusive and widen the result set.

**HARD LIMIT**  
No limit   
 Exclude   
 Use hierarchy 

**MINIMUM COUNT \***  
1 

**WEIGHT \***  
0 

**FACET SORTING**  
 Sort by active state   
**Sort order**  
 Ascending

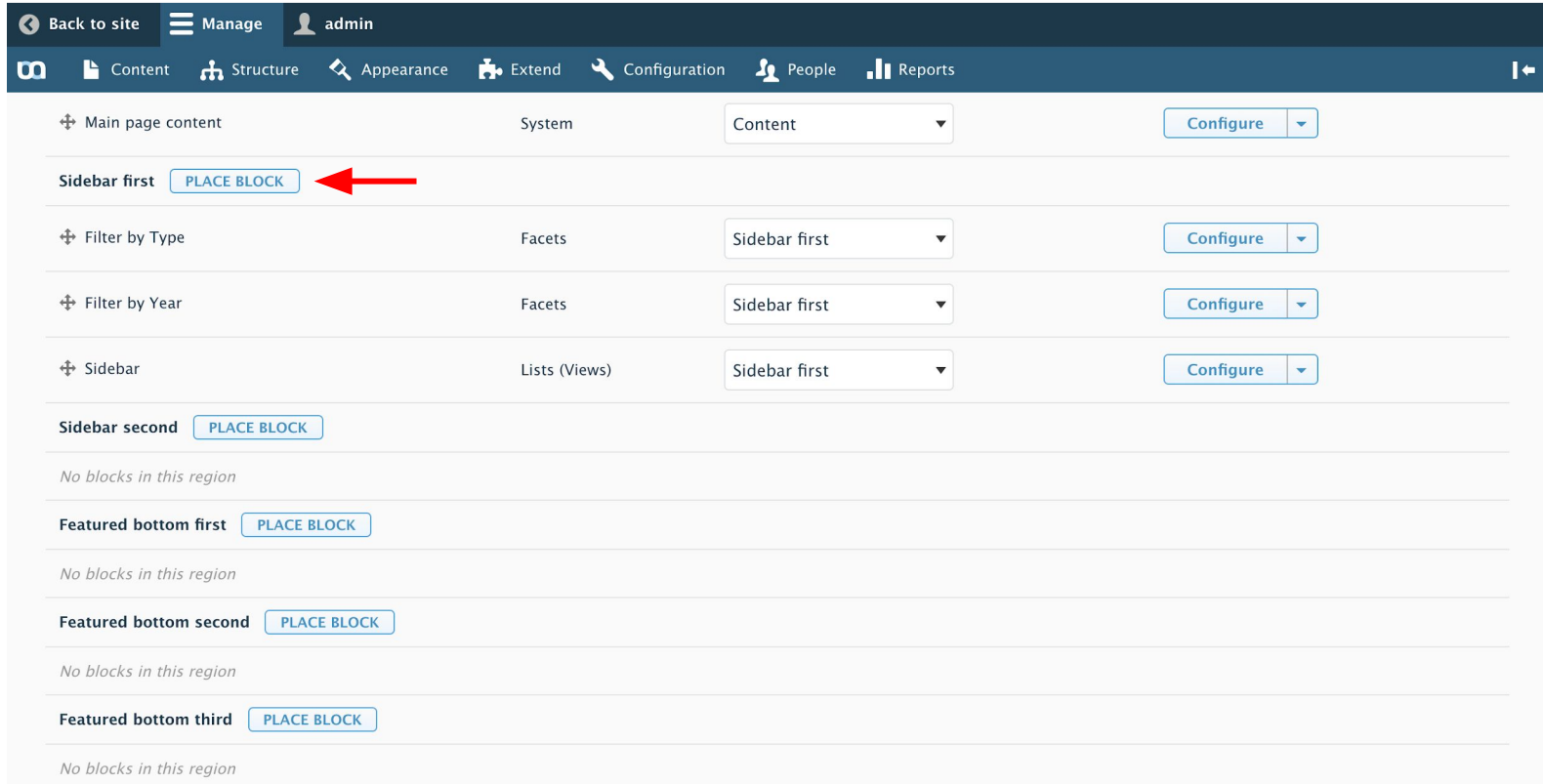
Path: /admin/config/search/facets/<facet>/edit

**WEIGHT \***

 ?**FACET SORTING** Sort by active state ?**Sort order** Ascending Descending Sort by count ?**Sort order** Ascending Descending Sort by display value ?**Sort order** Ascending Descending Sort by raw value ? Sort by taxonomy term weight ?**▶ ADVANCED SETTINGS****SAVE**

Path: /admin/config/search/facets/&lt;facet&gt;/edit





The screenshot shows the Drupal Facets configuration page. The top navigation bar includes 'Back to site', 'Manage', and 'admin'. Below the navigation bar are tabs for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', and 'Reports'. The main content area displays a list of facets with their respective configurations. A red arrow points to the 'PLACE BLOCK' button for the 'Sidebar first' facet.

Facet Name	System	Configuration	Action
Main page content	System	Content	Configure
Sidebar first			PLACE BLOCK
Filter by Type	Facets	Sidebar first	Configure
Filter by Year	Facets	Sidebar first	Configure
Sidebar	Lists (Views)	Sidebar first	Configure

Below the facets list, there are four regions, each with a 'PLACE BLOCK' button and a message 'No blocks in this region':

- Sidebar second
- Featured bottom first
- Featured bottom second
- Featured bottom third

Path: /admin/structure/block

 FOUR KITCHENS  
My account Log out  
Search  
kitchens  
Go  
Welcome to DrupalCon Nashville! About Us Contact Us[Home](#)

## Filter by Type

- Article(4)
- Page(1)

## Search Results

## Search

kitchens

Go

[Contact Us](#)

... Number 1-833-WEBCHEF (1-833-932-2433) Payment Address Four **Kitchens** PO Box 733274 Dallas, TX 75391-3274 Mailing Address Four **Kitchens** 4300 Speedway #49019 Austin, TX 78765 Looking for ...

[Screening Your Calls: Using Green Screen for Video Calls](#)

... software, and everything in between. Here at Four **Kitchens**, almost every meeting is virtual , and almost ... free browser-based “Hangouts” video chat. Four **Kitchens** has since moved on to Zoom, a native application ...

[Augmented Reality on the web is here](#)

... Aaron Stanush is president and co-founder at Four **Kitchens** where he manages presence, products, and ...

[Spectre and Meltdown CPU Security Holes Performance Impact](#)



My account Log out

Search  
kitchens

Go

Welcome to DrupalCon Nashville! About Us Contact Us

[Home](#)

## Filter by Type

- Page(1)
- Article(4)

## Filter by Channel

- Tech Tips(2)
- AR & VR(1)
- Emulsify(1)

## Search Results

## Search

kitchens

Go

[Screening Your Calls: Using Green Screen for Video Calls](#)

... software, and everything in between. Here at Four **Kitchens**, almost every meeting is virtual , and almost ... free browser-based “Hangouts” video chat. Four **Kitchens** has since moved on to Zoom, a native application ...

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... Aaron Stanush is president and co-founder at Four **Kitchens** where he manages presence, products, and ...

[Spectre and Meltdown CPU Security Holes Performance Impact](#)

... by Chris Martin Chris Martin is a support engineer at Four **Kitchens**. When not maintaining websites he can be found ...

[Emulsify 2: Building a Full Site Header in Drupal](#)

... Evan Willhite Evan Willhite is a frontend engineer at Four **Kitchens** who thrives on creating delightful digital ...

# Monitoring

- Using Google Analytics by defining a Query parameters with GA itself.
- Using the “Track internal Search” mechanism on Google analytics module.
- Search API Stats (in development)
- Drupal 8 community modules in early development

# Resources

Example Site Repo:

<https://github.com/fourkitchens/dcon2018-searchapi-solr>

Modules:

[https://www.drupal.org/project/search\\_api](https://www.drupal.org/project/search_api)

[https://www.drupal.org/project/search\\_api\\_solr](https://www.drupal.org/project/search_api_solr)

<https://www.drupal.org/project/facets>

Documentation:

<https://www.drupal.org/docs/8/modules/search-api>

<https://www.drupal.org/node/1999280>

<https://drushcommands.com/drush-8x/search-api>

# ...MOAR Resources

UX:

<https://www.cludo.com/blog/search-vs-navigate-people-behave-websites-search-navigate>

<https://www.nngroup.com/articles/filters-vs-facets>

Monitoring:

<https://support.google.com/analytics/answer/1012264>

<https://www.webwash.net/how-to-track-site-search-queries-in-drupal>

Elastic Search

[https://www.drupal.org/project/elasticsearch\\_connector](https://www.drupal.org/project/elasticsearch_connector)

<https://www.lullabot.com/articles/indexing-content-from-drupal-8-to-elasticsearch>

# Thank you maintainers !

## Search API

- drunken monkey
- Nick\_vh

## Facets

- StryKaizer
- Borisson\_
- Nick\_vh

## Search API Solr

- Mkalkbrenner
- cspitzlay
- drunken monkey
- Berdir
- amateescu

# Reminder: Contribution sprints

Friday, April 13, 2018

Mentored  
Core sprint  
9:00-18:00  
Room: 103

First time  
sprinter workshop  
9:00-12:00  
Room: 101

General  
sprint  
9:00-18:00  
Room: 104

#drupalsprint





# What did you think?

Locate this session at the DrupalCon Nashville website:  
<http://nashville2018.drupal.org/schedule>

Take the survey!  
<https://www.surveymonkey.com/r/DrupalConNashville>

## Thank you!

# Questions?

