Apache Solr Server Installation Steps

1. Update System

   $ sudo apt-get update
   $ apt-get upgrade -y

2. Setting up the Java Runtime Environment

   $ sudo apt-get install python-software-properties *[to install Python Software properties in order to install the latest Java 8]*

   $ sudo add-apt-repository ppa:webupd8team/java *[add the webupd8team Java PPA repository in your system]*

   $ sudo apt-get update

   $ sudo apt-get install oracle-java8-installer *[install the latest version of Oracle Java 8]*

   $ java -version *[check the version of Java installed]*

3. Installing the Solr application

   $ cd /tmp
   $ wget http://mirror.fibergrid.in/apache/lucene/solr/6.5.0/solr-6.5.0.tgz *[downloading the Solr distribution]*

   $ tar xzf solr-6.5.0.tgz solr-6.5.0/bin/install_solr_service.sh --strip-components=2 *[extract the service installation file]*

   $ sudo ./install_solr_service.sh solr-6.5.0.tgz *[install Solr service]*

4. Create solr search collection

   $ sudo su - solr -c "/opt/solr/bin/solr create -c edxsolr -n data_driven_schema_configs"

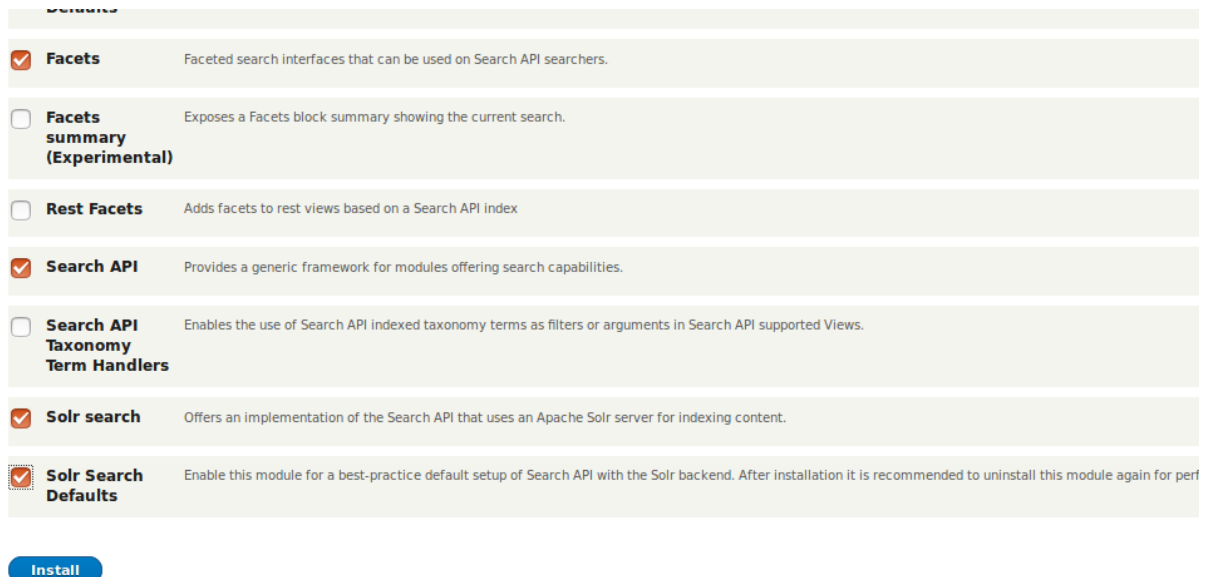You can see created core for solr search server by visiting link :
http://localhost:8983/solr/

Solr Search API Installation

$ sudo composer config repositories.drupal composer https://packagist.org

$ sudo composer require "drupal/search_api_solr"

$ sudo composer require "drupal/facets:^1.0"

1. Extend following modules

.Facets
.Search API
.Solr search
.Solr Search Defaults

2. Copy config files from module to solr core conf folder

$ sudo su - solr -c "cp /var/www/html/iitbombay/modules/contrib/search_api_solr/solr-conf/6.x/* /var/solr/data/edxsolr/conf"

$ sudo service solr restart

Configure the Solr server

Admin >> Configuration >> Search Api >> Server >> Edit

Search API ☆

Below is a list of indexes grouped by the server they are associated with. A server is the definition of the actual indexing, querying and storage engine (for example, an Apache Solr server, the database, ...). An index defines the indexed content (for example, all content and all comments on "Article" posts).

The default Drupal core Search module is still enabled. If you are using Search API, you probably want to uninstall the Search module for performance reasons. For more information see the Search API handbook.

+ Add server   **+ Add index**

TYPE	NAME	STATUS	OPERATIONS
Server	**Solr Server** Default Solr server created by the Solr Search Defaults module	✓	Edit ▾
Index	Default Solr content index Default content index created by the Solr Search Defaults module	✓	ID: default_solr_server Edit ▾

Change 'Solr core' to edxsolr [your core] (default is d8) and save.

CONFIGURE *STANDARD* SOLR CONNECTOR

A standard connector usable for local installations of the standard Solr distribution.

HTTP protocol

| http ▾ |

The HTTP protocol to use for sending queries.

Solr host *

| localhost |

The host name or IP of your Solr server, e.g. localhost or www.example.com.

Solr port *

| 8983 |

The Jetty example server is at port 8983, while Tomcat uses 8080 by default.

Solr path

| /solr |

The path that identifies the Solr instance to use on the server.

Solr core

| edxsolr |

The name that identifies the Solr core to use on the server.

On same page in 'view' tab , you should see a message "The Solr server could be reached" and "The Solr core could be accessed":

Solr server URI	http://10.129.103.23:8983/solr/
Solr core URI	http://10.129.103.23:8983/solr/#/edxsolr
Server Connection	The Solr server could be reached.
Core Connection	The Solr core could be accessed (latency: 3.0780301818848 ms).
Configured Solr Version	6.5.0

Uninstall 'Solr Search Defaults'

☑	**Solr Search Defaults**	Enable this module for a best-practice default setup of Search API with the Solr backend. After installation it is recommended to uninstall this module again for performance reasons. The provided configuration will not be removed.

Uninstall

Configure the Solr index

The 'Solr Search Defaults' module creates a default content index and view 'Solr search content' containing all published nodes on the website.

The concept of storing multiple Search API indexes in one Solr core is bad practice and randomly breaks a lot of advanced features like spell checking, suggestions, autmplete and others. Create a second core within your Solr server and assign this "index" to that core.

1. Add new core to solr server named 'edxcourse'

  $ sudo su - solr -c "/opt/solr/bin/solr create -c edxcourse -n data_driven_schema_configs"

  $ sudo su - solr -c "cp /var/www/html/iitbombay/modules/contrib/search_api_solr/solr-conf/6.x/* /var/solr/data/edxcourse/conf"

2. Add new search server 'Course Search Server'

  Admin >> Configuration >> Search Api >> Server

3. Add New Index

Index name : Front Course Index
Data Sources : content
Bundles: None except thoses selected (select course)
Server: Course Search Server

4. Add Fields to Index.

Go to view Tab and Reindex all.

5. Create new view to display indexed search result. As a block / page

Title : Inner Course List
Show: Renderd Entity (Index Front Course Index)
Path: /all_courses
Pager : Infinite Scroll

6. Create facet

Admin >> Configuration >> Facets >> Add facets

Facet Source : View we have just created (View Inner Course List)

Fields : Select index field with which we are going to create Facet. e.g Subject

7. Add facets and search view block to region.