

Installation et Atelier Sphinx



Réalisée par : **Raouzi Khaoula**

⇒ Install ubuntu in VMware

link : <https://ubuntu.com/download/desktop>

The latest LTS version of Ubuntu, for desktop PCs and laptops. LTS stands for long-term support—which means five years of free security and maintenance updates, extended up to 12 years with Ubuntu Pro.

Download 24.04.1 LTS 5.8GB

For other versions of Ubuntu Desktop including torrents, the network installer, a list of local mirrors and past releases check out our alternative downloads.

What's new System requirements How to install

- New Desktop installer with support for autostart
- New App Center and Firmware Updater applications
- GNOME 46 with support for quarter screen tiling
- Advanced Active Directory Group Policy Object support for Ubuntu Pro users

	ubuntu-20.04.6-desktop-amd64.list	2023-03-16 15:58	39K	Desktop image for 64-bit PC (AMD64) computers (file listing)
	ubuntu-20.04.6-desktop-amd64.manifest	2023-03-16 15:52	59K	Desktop image for 64-bit PC (AMD64) computers (contents of live filesystem)
	ubuntu-20.04.6-live-server-amd64.iso	2023-03-14 23:02	1.4G	Server install image for 64-bit PC (AMD64) computers (standard download)
	ubuntu-20.04.6-live-server-amd64.iso.torrent	2023-03-22 14:30	111K	Server install image for 64-bit PC (AMD64) computers (BitTorrent download)
	ubuntu-20.04.6-live-server-amd64.iso.zsync	2023-03-22 14:30	2.8M	Server install image for 64-bit PC (AMD64) computers (zsync metafile)

⇒ Installation du moteur de recherche Sphinx sur Ubuntu

si python n'est pas déjà installer sur ubuntu voici les commandes :

commandes :

- sudo apt install python3**
- sudo apt install python3-pip**
- python3 --version**

→ explication :

sudo : Exécute la commande avec des priviléges administratifs.

apt : Le gestionnaire de paquets sur Ubuntu.

pip (Python Package Installer) est utilisé pour gérer les bibliothèques Python

```
khaoula@ubuntu:~$ sudo apt install python3
[sudo] password for khaoula:
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3 is already the newest version (3.8.2-0ubuntu2).
python3 set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 302 not upgraded.
khaoula@ubuntu:~$
```

```
0 upgraded, 0 newly installed, 0 to remove and 302 not upgraded.
khaoula@ubuntu:~$ sudo apt install python3-pip
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  binutils binutils-common binutils-x86_64-linux-gnu build-essential cpp-9
  dpkg-dev fakeroot g++ g++-9 gcc gcc-10-base gcc-9 gcc-9-base
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl
  libasan5 libatomic1 libbinbufs libc-dev-bin libc6 libc6-dbg libc6-dev
  libgcc1-0 libcrypt-dev libctf-nobfd0 libctf0 libexpat1 libexpat1-dev
  libfakeroom libgcc-9-dev libgcc-s1 libgomp1 libitm1 liblsan0 libpython3-dev
  libpython3.8 libpython3.8-dev libpython3.8-minimal libpython3.8-stdlib
  libquadmath0 libstdc++-9-dev libstdc++-6 libtsan0 libubsan1 linux-libc-dev
  make manpages-dev python-pip-whl python3-dev python3-distutils
  python3-lib2to3 python3-pkg-resources python3-setuptools python3-wheel
  python3.8 python3.8-dev python3.8-minimal zlib1g-dev
Suggested packages:
  binutils-doc gcc-9-locales debian-keyring g++-multilib g++-9-multilib
  gcc-9-doc gcc-multilib autoconf automake libtool flex bison gcc-doc
  gcc-9-multilib glibc-doc libstdc++-9-doc make-doc python-setuptools-doc
  python3.8-venv python3.8-doc binfmt-support
The following NEW packages will be installed:
  binutils binutils-common binutils-x86_64-linux-gnu build-essential dpkg-dev
```

⇒ version sphinx :

Sortie de Sphinx 3.7.1

Aujourd'hui, nous publions [Sphinx 3.7.1](#), et après avoir sauté un article sur Sphinx 3.6.1 en octobre 2023, permettez-moi de souligner les principales fonctionnalités des versions 3.6 et 3.7. Depuis la version 3.5, nous avons ajouté :

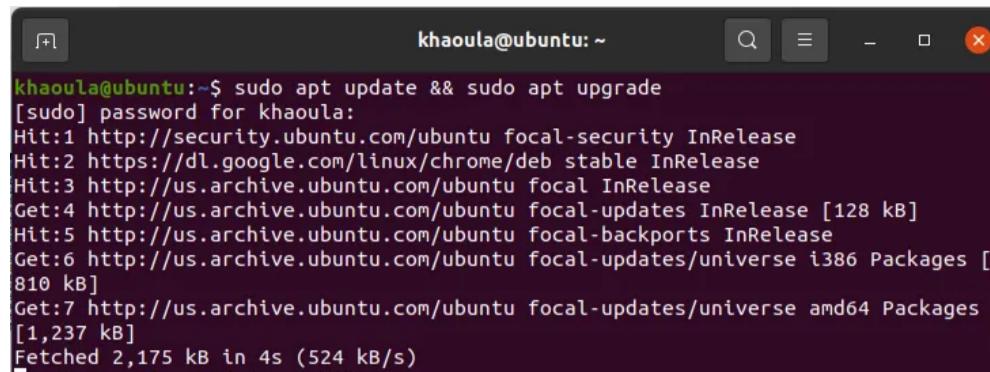
- index vectoriels** pour les recherches ANN
- indices de percolation** pour les recherches « inversées »
- syntaxe attr_xxx** unifiée pour les schémas d'index dans les configurations
- jointures côté indexeur** via SQL et CSV
- authentification de l'utilisateur**
- REPLACE ... KEEP clause**
- searchd decode** commande pour décoder les crash dumps de l'API

Il existe également [de nombreuses autres fonctionnalités « plus petites », des améliorations et des corrections de bugs](#). Par exemple, l'une de mes préférées est la syntaxe base64 spéciale pour mettre des vecteurs INT8 dans Sphinx. C'est une fonctionnalité assez petite en effet, mais elle nous a permis de réduire de plus de 200 Go l'une de nos bases de données les plus chargées et de gagner du temps sur la réindexation. Sympa ! Mais passons en revue ces 7 principales fonctionnalités (choisies en fonction du vote de l'équipe plutôt que de mes préférences personnelles, donc elles doivent être plus intéressantes que ce bit base64).

[En savoir plus...](#)

⇒ Install Sphinx using ubuntu

- faire un mise à jour



```
khaoula@ubuntu:~$ sudo apt update && sudo apt upgrade
[sudo] password for khaoula:
Hit:1 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:2 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu focal InRelease
Get:4 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease [128 kB]
Hit:5 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Get:6 http://us.archive.ubuntu.com/ubuntu focal-updates/universe i386 Packages [810 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1,237 kB]
Fetched 2,175 kB in 4s (524 kB/s)
```

- Installing Sphinx is much easier from Sphinxsearch PPA repository, because you will get all dependencies and can also update Sphinx to the latest version with the same command.

 Commande for installation of Sphinx:

→ First, add Sphinxsearch repository and update the list of packages:

- `sudo add-apt-repository ppa:builds/sphinxsearch-rel22`
- `sudo apt-get update`

→ Install/update sphinxsearch package:

```
sudo apt-get install sphinxsearch
```

→ Or we can use this full command:

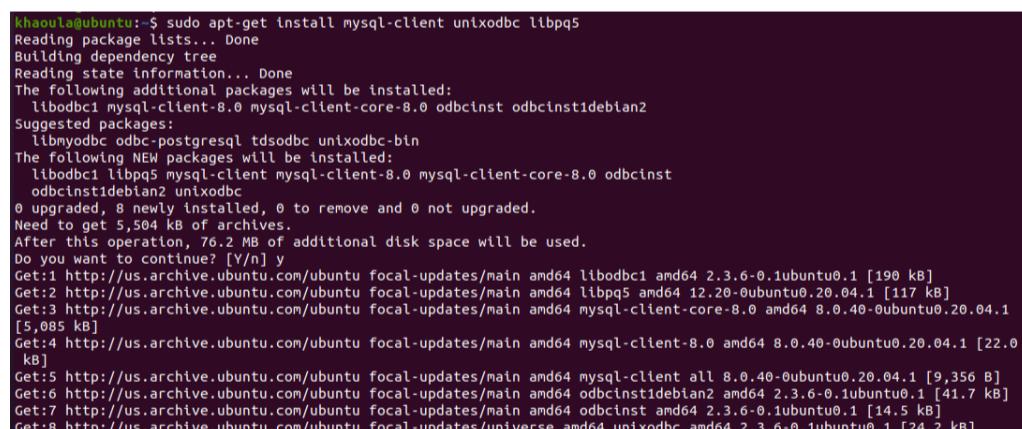
- `sudo add-apt-repository ppa:builds/sphinxsearch-rel22 && sudo apt-get update && sudo apt-get install sphinxsearch`

→ explain the ppa part :

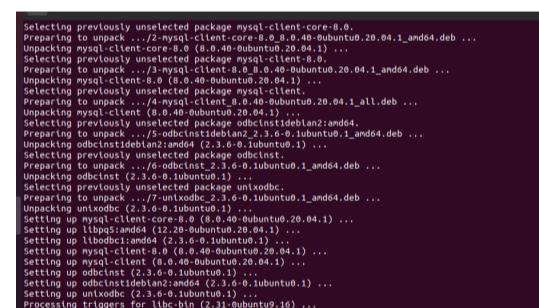
- PPA or Personal Package Archive
- Ce PPA spécifique contient des versions plus récentes, souvent en développement
- the first command : une source de packages maintenue par des développeurs externes ou des contributeurs de logiciels

→ `rel22` est une indication de la version ou de la branche du logiciel **SphinxSearch** fournie par ce **PPA (Personal Package Archive)**, référence à la **release 2.2** (version 2.2) de SphinxSearch.

⇒ install some library that will use it next step :

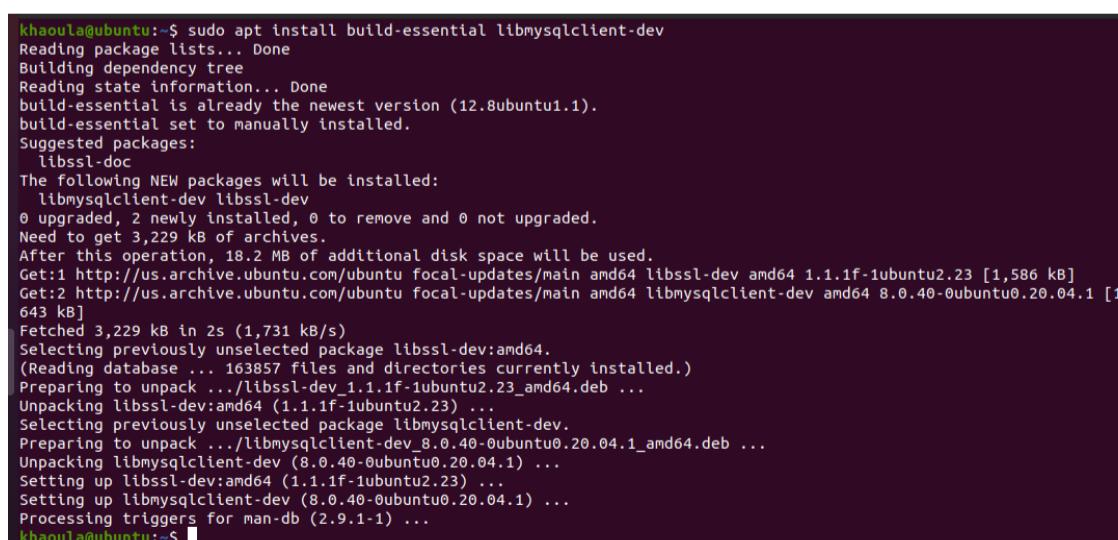


```
khaoula@ubuntu:~$ sudo apt-get install mysql-client unixodbc libpq5
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libodbc1 mysql-client-core-8.0 odbcinst odbcinstdebian2
Suggested packages:
  libmyodbc odbc-postgresql tdsodbc unixodbc-bin
The following NEW packages will be installed:
  libodbc1 libpq5 mysql-client mysql-client-core-8.0 mysql-client-core-8.0 odbcinst
  odbcinstdebian2 unixodbc
0 upgraded, 8 newly installed, 0 to remove and 0 not upgraded.
Need to get 5,504 kB of archives.
After this operation, 76.2 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libodbc1 amd64 2.3.6-0.1ubuntu0.1 [190 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libpq5 amd64 12.20-0ubuntu0.20.04.1 [117 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 mysql-client-core-8.0 amd64 8.0.40-0ubuntu0.20.04.1
[5,085 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 mysql-client-8.0 amd64 8.0.40-0ubuntu0.20.04.1 [22.0 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 mysql-client all 8.0.40-0ubuntu0.20.04.1 [9,356 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 odbcinstdebian2 amd64 2.3.6-0.1ubuntu0.1 [41.7 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 odbcinst amd64 2.3.6-0.1ubuntu0.1 [14.5 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 unixodbc amd64 2.3.6-0.1ubuntu0.1 [24.2 kB]
```



```
Selecting previously unselected package mysql-client-core-8.0.
Preparing to unpack .../mysql-client-core-8.0_8.0.40-0ubuntu0.20.04.1_amd64.deb ...
Unpacking mysql-client-core-8.0 (8.0.40-0ubuntu0.20.04.1) ...
Setting up mysql-client-core-8.0 (8.0.40-0ubuntu0.20.04.1) ...
Selecting previously unselected package mysql-client-8.0.
Preparing to unpack .../mysql-client-8.0_8.0.40-0ubuntu0.20.04.1_amd64.deb ...
Unpacking mysql-client-8.0 (8.0.40-0ubuntu0.20.04.1) ...
Setting up mysql-client-8.0 (8.0.40-0ubuntu0.20.04.1) ...
Selecting previously unselected package odbcinst.
Preparing to unpack .../odbcinst_2.3.6-0.1ubuntu0.1_amd64.deb ...
Unpacking odbcinst (2.3.6-0.1ubuntu0.1) ...
Setting up odbcinst (2.3.6-0.1ubuntu0.1) ...
Selecting previously unselected package unixodbc.
Preparing to unpack .../unixodbc_2.3.6-0.1ubuntu0.1_amd64.deb ...
Unpacking unixodbc (2.3.6-0.1ubuntu0.1) ...
Setting up unixodbc (2.3.6-0.1ubuntu0.1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.16) ...
Processing triggers for man-db (2.9.1-1) ...
```

⇒ Installation de Mysqlclient



```
khaoula@ubuntu:~$ sudo apt install build-essential libmysqlclient-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
build-essential is already the newest version (12.8ubuntu1.1).
build-essential set to manually installed.
Suggested packages:
  libssl-doc
The following NEW packages will be installed:
  libmysqlclient-dev libssl-dev
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 3,229 kB of archives.
After this operation, 18.2 MB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libssl-dev amd64 1.1.1f-1ubuntu2.23 [1,586 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libmysqlclient-dev amd64 8.0.40-0ubuntu0.20.04.1 [1,643 kB]
Fetched 3,229 kB in 2s (1,731 kB/s)
Selecting previously unselected package libssl-dev:amd64.
(Reading database ... 163857 files and directories currently installed.)
Preparing to unpack .../libssl-dev_1.1.1f-1ubuntu2.23_amd64.deb ...
Unpacking libssl-dev:amd64 (1.1.1f-1ubuntu2.23) ...
Selecting previously unselected package libmysqlclient-dev.
Preparing to unpack .../libmysqlclient-dev_8.0.40-0ubuntu0.20.04.1_amd64.deb ...
Unpacking libmysqlclient-dev (8.0.40-0ubuntu0.20.04.1) ...
Setting up libssl-dev:amd64 (1.1.1f-1ubuntu2.23) ...
Setting up libmysqlclient-dev (8.0.40-0ubuntu0.20.04.1) ...
Processing triggers for man-db (2.9.1-1) ...
```

⇒ Installation de sphinxsearch en utilisant cette commande

```

khaoula@ubuntu:~$ sudo add-apt-repository ppa:builds/sphinxsearch-rel22
Fast standalone full-text SQL search engine Sphinx is a standalone full text search engine, meant to provide fast, size-efficient and relevant fulltext search functions to other applications. Sphinx was specially designed to integrate well with SQL databases and scripting languages. Currently built-in data sources support fetching data either via direct connection to MySQL or PostgreSQL, or using XML pipe mechanism (a pipe to indexer in special XML-based format which Sphinx recognizes).
The 'rel22' repo contains the builds from current release branch (2.2.x), which updated only with bugfixes (minor number), or with major releases. It is recommended for production.
More info: https://launchpad.net/~builds/+archive/ubuntu/sphinxsearch-rel22
Press [ENTER] to continue or Ctrl-c to cancel adding it.

Hit:1 http://security.ubuntu.com/ubuntu focal-security InRelease
Ign:2 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu focal InRelease
Hit:3 https://dl.google.com/linux/chrome/deb stable InRelease
Err:4 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu focal Release
  404  Not Found [IP: 185.125.190.80 80]
Hit:5 http://us.archive.ubuntu.com/ubuntu focal InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:7 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Reading package lists... Done
E: The repository 'http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu focal Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
khaoula@ubuntu:~$ 

```

⇒ d'après l'erreur qui existe il semble que la version d'ubuntu ne s'amache pas avec rel22 donc je veux essayer une autre solution utilisation de Ubuntu 16.04

⇒ Another solution that can be use it is to change the version of ubuntu in my situation ubuntu 20.0 didn't work the version of ppa but in ubuntu 16.04 it's work so the ubuntu version taht work is 16

```

Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
khaoula@ubuntu:~$ sudo add-apt-repository ppa:builds/sphinxsearch-rel22
Fast standalone full-text SQL search engine Sphinx is a standalone full text search engine, meant to provide fast, size-efficient and relevant fulltext search functions to other applications. Sphinx was specially designed to integrate well with SQL databases and scripting languages. Currently built-in data sources support fetching data either via direct connection to MySQL or PostgreSQL, or using XML pipe mechanism (a pipe to indexer in special XML-based format which Sphinx recognizes).
The 'rel22' repo contains the builds from current release branch (2.2.x), which updated only with bugfixes (minor number), or with major releases. It is recommended for production.
More info: https://launchpad.net/~builds/+archive/ubuntu/sphinxsearch-rel22
Press [ENTER] to continue or ctrl-c to cancel adding it.

gpg: keyring '/tmp/tmps8h6irjk/secreting.gpg' created
gpg: keyring '/tmp/tmps8h6irjk/pubring.gpg' created
gpg: requesting key 17EC1B73 from hkp server keyserver.ubuntu.com
gpg: /tmp/tmps8h6irjk/trustdb.gpg: trustdb created
gpg: key 17EC1B73: public key "Launchpad PPA for Sphinxsearch builds team" imported
gpg: Total number processed: 1
gpg:           imported: 1  (RSA: 1)
OK
khaoula@ubuntu:~$ 

```

```

khaoula@ubuntu:~$ sudo apt-get install mysql-client unixodbc libpq5
[sudo] password for khaoula:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
libaio1 libodbc1 mysql-client-5.7 mysql-client-core-5.7 mysql-common odbcinst odbcinstdebian2
Suggested packages:
libmyodbc odbc postgresql tdsodbc unixodbc-bin
The following NEW packages will be installed:
libaio1 libodbc1 libpq5 mysql-client mysql-client-5.7 mysql-client-core-5.7 mysql-common odbcinst odbcinstdebian2
unixodbc
0 upgraded, 10 newly installed, 0 to remove and 189 not upgraded.
Need to get 8,049 kB of archives.
After this operation, 64.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 libaio1 amd64 0.3.110-2 [6,356 B]
Get:2 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 libodbc1 amd64 2.3.1-4.1 [180 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 libpq5 amd64 9.5.25-0ubuntu0.16.04.1 [79.2 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-client-core-5.7 amd64 5.7.33-0ubuntu0.16.04.1 [6,254 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-common all 5.7.33-0ubuntu0.16.04.1 [14.8 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-client-5.7 amd64 5.7.33-0ubuntu0.16.04.1 [1,430 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-client all 5.7.33-0ubuntu0.16.04.1 [10.0 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 odbcinstdebian2 amd64 2.3.1-4.1 [41.1 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 odbcinst amd64 2.3.1-4.1 [13.1 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 unixodbc amd64 2.3.1-4.1 [20.5 kB]
Fetched 8,049 kB in 30s (266 kB/s)
Selecting previously unselected package libaio1:amd64.
(Reading database ... 180219 files and directories currently installed.)

```

```

Unpacking mysql-client-core-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package mysql-common.
Preparing to unpack .../mysql-common_5.7.33-0ubuntu0.16.04.1_all.deb ...
Unpacking mysql-common (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package mysql-client-5.7.
Preparing to unpack .../mysql-client-5.7_5.7.33-0ubuntu0.16.04.1_amd64.deb ...
Unpacking mysql-client-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package mysql-client.
Preparing to unpack .../mysql-client_5.7.33-0ubuntu0.16.04.1_all.deb ...
Unpacking mysql-client (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package odbcinstdebian2:amd64.
Preparing to unpack .../odbcinstdebian2_2.3.1-4.1_amd64.deb ...
Unpacking odbcinstdebian2:amd64 (2.3.1-4.1) ...
Selecting previously unselected package odbcinst.
Preparing to unpack .../odbcinst_2.3.1-4.1_amd64.deb ...
Unpacking odbcinst (2.3.1-4.1) ...
Selecting previously unselected package unixodbc.
Preparing to unpack .../unixodbc_2.3.1-4.1_amd64.deb ...
Unpacking unixodbc (2.3.1-4.1) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Processing triggers for man-db (2.7.5-1) ...
Setting up libaio1:amd64 (0.3.110-2) ...
Setting up libodbc1:amd64 (2.3.1-4.1) ...
Setting up libpq5:amd64 (9.5.25-0ubuntu0.16.04.1) ...
Setting up mysql-client-core-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Setting up mysql-common (5.7.33-0ubuntu0.16.04.1) ...
update-alternatives: using /etc/mysql/my.cnf.fallback to provide /etc/mysql/my.cnf (my.cnf) in auto mode
Setting up mysql-client-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Setting up mysql-client (5.7.33-0ubuntu0.16.04.1) ...
Setting up odbcinstdebian2:amd64 (2.3.1-4.1) ...
Setting up odbcinst (2.3.1-4.1) ...
Setting up unixodbc (2.3.1-4.1) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
khaoula@ubuntu:~$ 

```

```

Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
khaoula@ubuntu:~$ sudo apt-get update
Hit:1 http://us.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://us.archive.ubuntu.com/ubuntu xenial-updates InRelease [106 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu xenial-backports InRelease [106 kB]
Get:4 http://security.ubuntu.com/ubuntu xenial-security InRelease [106 kB]
Get:5 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial InRelease [16.2 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 DEP-11 Metadata [314 kB]
Get:7 http://security.ubuntu.com/ubuntu xenial-security/main amd64 DEP-11 Metadata [93.8 kB]
Get:8 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 DEP-11 Metadata [212 kB]
Get:9 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 DEP-11 Metadata [130 kB]
Get:10 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial/main amd64 Packages [792 B]
Get:11 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 DEP-11 Metadata [2,464 B]
Get:12 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial/main i386 Packages [796 B]
Get:13 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial/main Translation-en [628 B]
Get:14 http://us.archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 DEP-11 Metadata [212 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 DEP-11 Metadata [281 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 DEP-11 Metadata [5,956 B]
Get:17 http://us.archive.ubuntu.com/ubuntu xenial-backports/main amd64 DEP-11 Metadata [3,336 B]
Get:18 http://us.archive.ubuntu.com/ubuntu xenial-backports/restricted amd64 DEP-11 Metadata [216 B]
Get:19 http://us.archive.ubuntu.com/ubuntu xenial-backports/universe amd64 DEP-11 Metadata [6,612 B]
Get:20 http://us.archive.ubuntu.com/ubuntu xenial-backports/multiverse amd64 DEP-11 Metadata [216 B]
Fetched 1,173 kB in 24s (47.3 kB/s)
Reading package lists... Done
khaoula@ubuntu:~$ 

```

→ Installation de sphinxsearch

```

khaoula@ubuntu:~$ sudo apt-get install sphinxsearch
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libmysqlclient20
The following NEW packages will be installed:
  libmysqlclient20 sphinxsearch
0 upgraded, 2 newly installed, 0 to remove and 189 not upgraded.
Need to get 3,466 kB of archives.
After this operation, 27.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial/main amd64 sphinxsearch amd64 2.2.11-release-0ubuntu13-xenial [2,782 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 libmysqlclient20 amd64 5.7.33-0ubuntu0.16.04.1 [684 kB]
Fetched 3,466 kB in 32s (106 kB/s)
Selecting previously unselected package libmysqlclient20:amd64.
(Reading database ... 180347 files and directories currently installed.)
Preparing to unpack .../libmysqlclient20_5.7.33-0ubuntu0.16.04.1_amd64.deb ...
Unpacking libmysqlclient20:amd64 (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package sphinxsearch.
Preparing to unpack .../sphinxsearch_2.2.11-release-0ubuntu13-xenial_amd64.deb ...
Unpacking sphinxsearch (2.2.11-release-0ubuntu13-xenial) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Processing triggers for ureadahead (0.100.0-19.1) ...
Processing triggers for systemd (229-4ubuntu21.28) ...
Processing triggers for man-db (2.7.5-1) ...
Setting up libmysqlclient20:amd64 (5.7.33-0ubuntu0.16.04.1) ...
Setting up sphinxsearch (2.2.11-release-0ubuntu13-xenial) ...
Adding group 'sphinxsearch' (GID 129) ...
Done.
Adding system user 'sphinxsearch' (UID 121) ...
Adding new user 'sphinxsearch' (UID 121) with group 'sphinxsearch' ...

```

```

0 upgraded, 2 newly installed, 0 to remove and 189 not upgraded.
Need to get 3,466 kB of archives.
After this operation, 27.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://ppa.launchpad.net/builds/sphinxsearch-rel22/ubuntu xenial/main amd64 sphinxsearch amd64 2.2.11-release-0ubuntu13-xenial [2,782 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 libmysqlclient20 amd64 5.7.33-0ubuntu0.16.04.1 [684 kB]
Fetched 3,466 kB in 32s (106 kB/s)
Selecting previously unselected package libmysqlclient20:amd64.
(Reading database ... 180347 files and directories currently installed.)
Preparing to unpack .../libmysqlclient20_5.7.33-0ubuntu0.16.04.1_amd64.deb ...
Unpacking libmysqlclient20:amd64 (5.7.33-0ubuntu0.16.04.1) ...
Selecting previously unselected package sphinxsearch.
Preparing to unpack .../sphinxsearch_2.2.11-release-0ubuntu13-xenial_amd64.deb ...
Unpacking sphinxsearch (2.2.11-release-0ubuntu13-xenial) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Processing triggers for ureadahead (0.100.0-19.1) ...
Processing triggers for systemd (229-4ubuntu21.28) ...
Processing triggers for man-db (2.7.5-1) ...
Setting up libmysqlclient20:amd64 (5.7.33-0ubuntu0.16.04.1) ...
Setting up sphinxsearch (2.2.11-release-0ubuntu13-xenial) ...
Adding group 'sphinxsearch' (GID 129) ...
Done.
Adding system user 'sphinxsearch' (UID 121) ...
Adding new user 'sphinxsearch' (UID 121) with group 'sphinxsearch' ...
Not creating home directory '/home/sphinxsearch'.

Do not forget to reindex all indexes by running: indexer --all

Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Processing triggers for ureadahead (0.100.0-19.1) ...
Processing triggers for systemd (229-4ubuntu21.28) ...
khaoula@ubuntu:~$ 

```

Remarque :

L'installation de Sphinx est beaucoup plus simple à partir du référentiel Sphinxsearch PPA, car vous obtiendrez toutes les dépendances et pourrez également mettre à jour Sphinx vers la dernière version avec la même commande

→ Tout d'abord, ajoutez le référentiel Sphinxsearch et mettez à jour la liste des packages

→ Installer/mettre à jour le package sphinxsearch

Le démon Sphinx `searchd` peut être démarré/arrêté à l'aide de la commande de service :

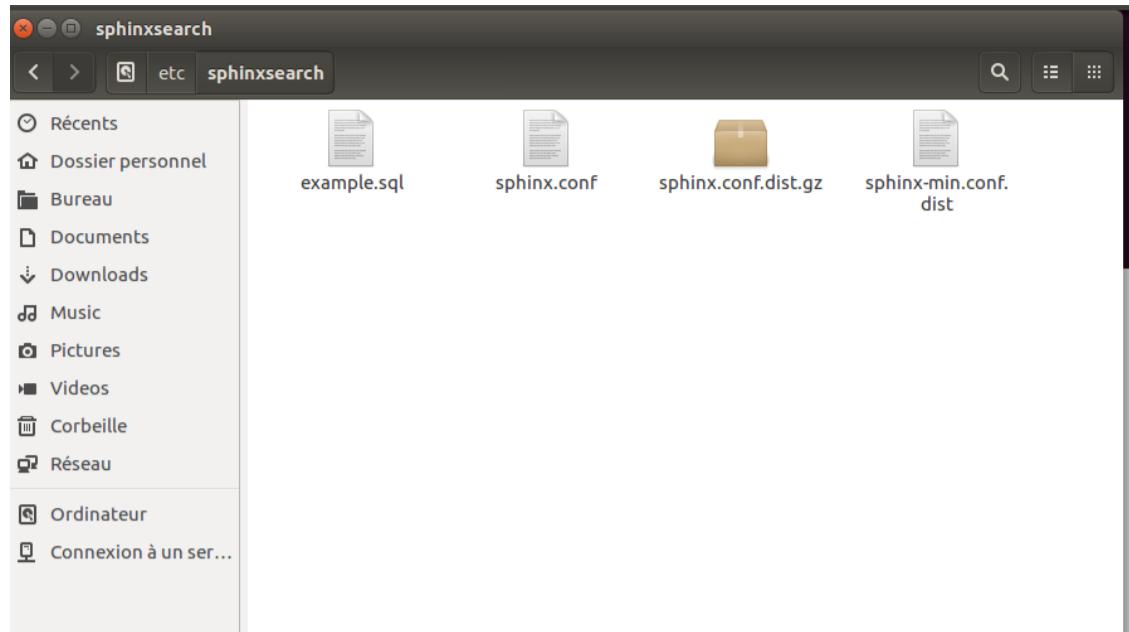
```
$ sudo service sphinxsearch start
```

→ Toutes les commandes d'exemple ci-dessous supposent que vous avez installé Sphinx dans `/usr/local/sphinx`, elles `searchd` peuvent donc être trouvées dans `/usr/local/sphinx/bin/searchd`

le fichier sphinx.config

pour voir les données qui contient dans ce fichier :

`/etc/sphinxsearch/sphinx.conf` : emplacement du fichier sphinx.config



La configuration de Sphinx doit être dans un fichier appelé `sphinx.conf` in `/etc/sphinxsearch`

La configuration se compose de 3 blocs principaux essentiels à l'exécution **index**, **searchd** et **source**

⇒ Le bloc **source** contient le type de source, le nom d'utilisateur et le mot de passe du serveur MySQL.

- `type` : Type de source de données à indexer.
- `sql_hostlocalhost` : Nom d'hôte de l'hôte MySQL
- `sql_user` : Nom d'utilisateur pour la connexion MySQL.
- `sql_pass` : Mot de passe de l'utilisateur MySQL.
- `sql_db` : Nom de la base de données qui stocke les données.
- `sql_query` : La requête qui vide les données de la base de données vers l'index

⇒ Le composant **d'index** contient la source et le chemin pour stocker les données.

- `source` : Nom du bloc source.
- `path` : Le chemin pour sauvegarder l'index.

⇒ Le composant **searchd** contient le port et d'autres variables pour exécuter le démon Sphinx.

- `listen` : Le port sur lequel le démon Sphinx va s'exécuter, suivi du protocole. Dans notre exemple, il s'agit de **9306:mysql41**
- `query_log` : Le chemin pour enregistrer le journal des requêtes.
- `pid_file` : Le chemin vers le fichier PID du démon Sphinx.
- `seamless_rotate` : Empêche les blocages de searchd lors de la rotation des index avec d'énormes quantités de données à pré-mettre en cache.
- `preopen_indexes` : S'il faut préouvrir de force tous les index au démarrage.
- `unlink_old` : S'il faut supprimer les anciennes copies d'index en cas de rotation réussie.

⇒ Tout les infos qui ont relation avec Searchd sont ici

- 9312 est utilisé pour les connexions API Sphinx.
- 9306 est utilisé pour les connexions via SphinxQL (similaire à MySQL) mysql41

⇒ Search about the important part of `sphinx.conf`

Éditeur de texte

sphinx.conf [Lecture seule] (/etc/sphinxsearch) - gedit

```

sphinx.conf
# multi-value, multiple listen points are allowed
# optional, defaults are 9312:sphinx and 9306:mysql41, as below
#
# listen          = 127.0.0.1
# listen          = 192.168.0.1:9312
# listen          = 9312
# listen          = /var/run/searchd.sock
listen           = 9312
listen           = 9306:mysql41

# log file, searchd run info is logged here
# optional, default is 'searchd.log'
log              = /var/log/sphinxsearch/searchd.log

# query log file, all search queries are logged here
# optional, default is empty (do not log queries)
query_log        = /var/log/sphinxsearch/query.log

# client read timeout, seconds
# optional, default is 5
read_timeout     = 5

# request timeout, seconds
# optional, default is 5 minutes
client_timeout   = 300

# maximum amount of children to fork (concurrent searches to run)
# optional, default is 0 (unlimited)

```

Enregistrer

```

searchd
{
    # [hostname:]port[:protocol], or /unix/socket/path to listen on
    # known protocols are 'sphinx' (SphinxAPI) and 'mysql41' (SphinxQL)
    #
    # multi-value, multiple listen points are allowed
    # optional, defaults are 9312:sphinx and 9306:mysql41, as below
    #
    # listen           = 127.0.0.1
    # listen           = 192.168.0.1:9312
    # listen           = 9312
    # listen           = /var/run/searchd.sock
    listen            = 9312
    listen            = 9306:mysql41

    # log file, searchd run info is logged here
    # optional, default is 'searchd.log'
    log               = /var/log/sphinxsearch/searchd.log

    # query log file, all search queries are logged here
    # optional, default is empty (do not log queries)
    query_log        = /var/log/sphinxsearch/query.log

    # client read timeout, seconds
    # optional, default is 5
    read_timeout      = 5
}

```

⇒ Ces données informent le moteur de recherche qu'il devra écouter le port 9312 and this is the listen that i will use in the next : 127.0.0.1 qu'il stockera son historique dans les fichiers searchd.log et query.log, et enfin que le fichier associé au processus que Sphinx créera sera searchd.pid

⇒ PID file, searchd process ID file name

pid_file = /var/run/sphinxsearch/searchd.pid

```

# maximum amount of persistent connections from this master to each agent host
# optional, but necessary if you use agent_persistent. It is reasonable to set the value
# as max_children, or less on the agent's hosts.
persistent_connections_limit = 30

# PID file, searchd process ID file name
# mandatory
pid_file = /var/run/sphinxsearch/searchd.pid

# seamless rotate, prevents rotate stalls if precatching huge datasets
# optional, default is 1
seamless_rotate = 1

# whether to forcibly reopen all indexes on startup
# optional, default is 1 (preopen everything)
preopen_indexes = 1

# whether to unlink .old index copies on successful rotation.
# optional, default is 1 (do unlink)
unlink_old = 1

# attribute updates periodic flush timeout, seconds
# updates will be automatically dumped to disk this frequently
# optional, default is 0 (disable periodic flush)
#
# attr_flush_period = 900

```

```

sphinx.conf * Sphinx doc.txt
# binlog files path; use empty string to disable binlog
# optional, default is build-time configured data directory
#
# binlog_path      = # disable logging
# binlog_path      = /var/lib/sphinxsearch/data # binlog.001 etc will be created there

# binlog flush/sync mode
# 0 means flush and sync every second
# 1 means flush and sync every transaction
# 2 means flush every transaction, sync every second
# optional, default is 2
#
# binlog_flush     = 2

# binlog per-file size limit
# optional, default is 128M, 0 means no limit
#
# binlog_max_log_size = 256M

# per-thread stack size, only affects workers=threads mode
# optional, default is 64K
#
# thread_stack     = 128K

```

⇒ Pour démarrer Sphinx, il suffit de démarrer le service sphinx. Pour cela, si vous êtes sous Ubuntu, la simple commande: **sudo service sphinx start**

Start Sphinx projet :

```

khaoula@ubuntu:~$ sudo service sphinxsearch start
[sudo] Mot de passe de khaoula :
khaoula@ubuntu:~$ 

```

```

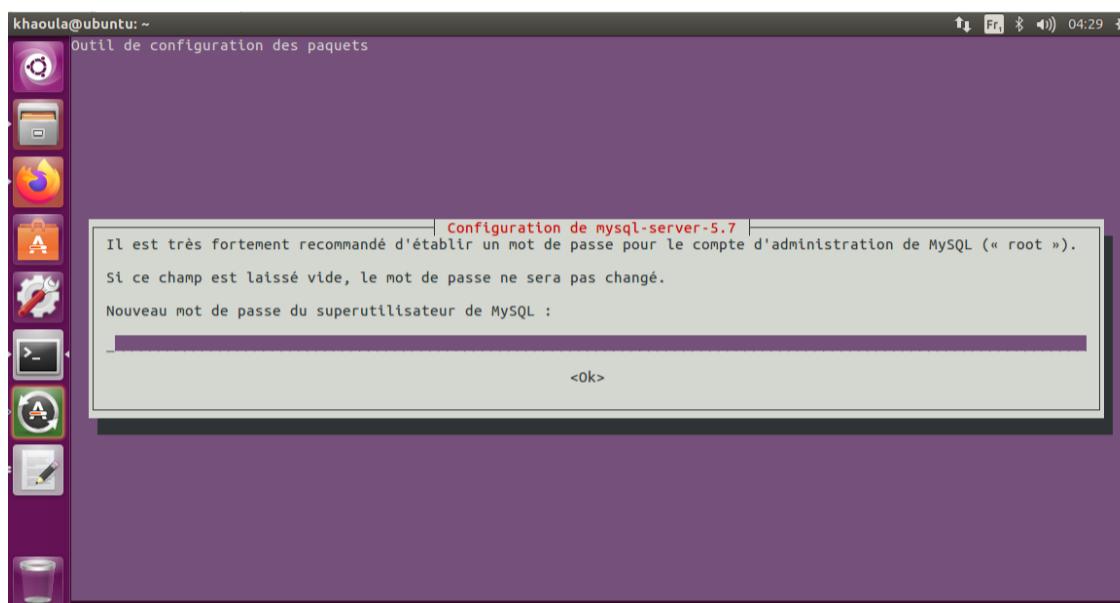
khaoula@ubuntu:~$ cd /etc/sphinxsearch
khaoula@ubuntu:/etc/sphinxsearch$ ls -l
total 32
-rw-r--r-- 1 sphinxsearch sphinxsearch 31069 oct.  7 2016 sphinx.conf
khaoula@ubuntu:/etc/sphinxsearch$ cd ..
khaoula@ubuntu:/etc$ cd ..
khaoula@ubuntu:$ cd /usr/local/sphinx/etc
bash: cd: /usr/local/sphinx/etc: Aucun fichier ou dossier de ce type
khaoula@ubuntu:$ which searchd
/usr/bin/searchd
khaoula@ubuntu:$ sudo find / -name "example.sql"
find: «/run/user/1000/gvfs»: Permission non accordée
/usr/share/doc/sphinxsearch/example-conf/example.sql
khaoula@ubuntu:$ cd /usr/share/doc/sphinxsearch
khaoula@ubuntu:/usr/share/doc/sphinxsearch$ ls -l
total 1260
-rw-r--r-- 1 root root   1444 oct.  7 2016 changelog.Debian.gz
-rw-r--r-- 1 root root   1568 sept.  6 2015 copyright
drwxr-xr-x 2 root root   4096 nov. 18 07:36 example-conf
-rw-r--r-- 1 root root   3969 juil. 19 2016 internals-coding-standard.txt
-rw-r--r-- 1 root root   1867 juil. 19 2016 internals-format-versions.txt.gz
-rw-r--r-- 1 root root   3984 juil. 19 2016 internals-index-format.txt.gz
-rw-r--r-- 1 root root   317 mars 10 2015 README.Debian
-rw-r--r-- 1 root root 1055279 juil. 19 2016 sphinx.html
-rw-r--r-- 1 root root 204599 juil. 19 2016 sphinx.txt.gz
khaoula@ubuntu:/usr/share/doc/sphinxsearch$ cd example-conf
khaoula@ubuntu:/usr/share/doc/sphinxsearch/example-conf$ ls -l
total 20
-rw-r--r-- 1 root root  903 juil. 19 2016 example.sql
-rw-r--r-- 1 root root 9625 oct.  7 2016 sphinx.conf.dist.gz
-rw-r--r-- 1 root root 1043 oct.  7 2016 sphinx-min.conf.dist
khaoula@ubuntu:/usr/share/doc/sphinxsearch/example-conf$ 

```

⇒ change the location to /etc/sphinxsearch ou il existe le fichier de configuration

```
khaoula@ubuntu:~$ sudo find / -name "example.sql"
find: «/run/user/1000/gvfs»: Permission non accordée
/usr/share/doc/sphinxsearch/example-conf/example.sql
khaoula@ubuntu:~$ cd /usr/share/doc/sphinxsearch
khaoula@ubuntu:/usr/share/doc/sphinxsearch$ ls -l
total 1260
-rw-r--r-- 1 root root 1444 oct. 7 2016 changelog.Debian.gz
-rw-r--r-- 1 root root 1568 sept. 6 2015 copyright
drwxr-xr-x 2 root root 4096 nov. 18 07:36 example-conf
-rw-r--r-- 1 root root 3969 juil. 19 2016 internals-coding-standard.txt
-rw-r--r-- 1 root root 1867 juil. 19 2016 internals-format-versions.txt.gz
-rw-r--r-- 1 root root 3984 juil. 19 2016 internals-index-format.txt.gz
-rw-r--r-- 1 root root 317 mars 10 2015 README.Debian
-rw-r--r-- 1 root root 1055279 juil. 19 2016 sphinx.html
-rw-r--r-- 1 root root 204509 juil. 19 2016 sphinx.txt.gz
khaoula@ubuntu:/usr/share/doc/sphinxsearch$ cd example-conf
khaoula@ubuntu:/usr/share/doc/sphinxsearch/example-conf$ ls -l
total 20
-rw-r--r-- 1 root root 903 juil. 19 2016 example.sql
-rw-r--r-- 1 root root 9625 oct. 7 2016 sphinx.conf.dist.gz
-rw-r--r-- 1 root root 1043 oct. 7 2016 sphinx-min.conf.dist
khaoula@ubuntu:/usr/share/doc/sphinxsearch/example-conf$ cd
khaoula@ubuntu:~$ sudo cp /usr/share/doc/sphinxsearch/example-conf/example.sql /etc/sphinxsearch/
khaoula@ubuntu:~$ sudo cp /usr/share/doc/sphinxsearch/example-conf/sphinx.conf.dist.gz /etc/sphinxsearch/
khaoula@ubuntu:~$ sudo cp /usr/share/doc/sphinxsearch/example-conf/sphinx-min.conf.dist /etc/sphinxsearch/
khaoula@ubuntu:~$ ls -l /etc/sphinxsearch/
total 52
-rw-r--r-- 1 root root 903 nov. 29 03:35 example.sql
-rw-r--r-- 1 sphinxsearch sphinxsearch 31069 oct. 7 2016 sphinx.conf
-rw-r--r-- 1 root root 9625 nov. 29 03:36 sphinx.conf.dist.gz
-rw-r--r-- 1 root root 1043 nov. 29 03:36 sphinx-min.conf.dist
khaoula@ubuntu:~$
```

⇒ lors d'installation de Mysql il faut préciser le mot de passe :



```
khaoula@ubuntu:~$ sudo apt install mysql-server
Lecture des listes de paquets... Fait
Construction de l'arbre des dépendances
Lecture des informations d'état... Fait
Les paquets supplémentaires suivants seront installés :
  libhtml-template-perl mysql-server-5.7 mysql-server-core-5.7
Paquets suggérés :
  libipcc-sharedcache-perl mailx tinyca
Les NOUVEAUX paquets suivants seront installés :
  libhtml-template-perl mysql-server mysql-server-5.7 mysql-server-core-5.7
  0 mis à jour, 4 nouvellement installés, 0 à enlever et 47 non mis à jour.
Il est nécessaire de prendre 9 709 ko dans les archives.
Après cette opération, 93,2 Mo d'espace disque supplémentaires seront utilisés.
Souhaitez-vous continuer ? [O/n] O
Réception de :1 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-server-core-5.7 amd64 5.7.33-0ubuntu0.16.0.16.0.4.1 [7 215 kB]
Réception de :2 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-server-5.7 amd64 5.7.33-0ubuntu0.16.0.4.1 [2 423 kB]
Réception de :3 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 libhtml-template-perl all 2.95-2 [60,4 kB]
Réception de :4 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-server all 5.7.33-0ubuntu0.16.0.4.1 [10,8 kB]
9 709 ko réceptionnés en 2s (4 156 ko/s)
Préconfiguration des paquets...
Sélection du paquet mysql-server-core-5.7 précédemment désélectionné.
(Lecture de la base de données... 216000 fichiers et répertoires déjà installés.)
Préparation du dépaquetage de .../mysql-server-core-5.7_5.7.33-0ubuntu0.16.04.1_amd64.deb ...
Dépaquetage du paquet mysql-server-core-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Sélection du paquet mysql-server-5.7 précédemment désélectionné.
Préparation du dépaquetage de .../mysql-server-5.7_5.7.33-0ubuntu0.16.04.1_amd64.deb ...
Dépaquetage du paquet mysql-server-5.7 (5.7.33-0ubuntu0.16.04.1) ...
Sélection du paquet libhtml-template-perl précédemment désélectionné.
```

```
Réception de [5 http://us.archive.ubuntu.com/ubuntu/xenial/main amd64 libtbbmalloc-perl all 2.95-2 [40,4 kB]
Réception de 4 [http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 mysql-server all 5.7.33-0ubuntu10.64.1 [10,4 kB]
[ 7/99] receptionnés en 2s (4 156 kB/s)

Selection du paquet mysql-server-core-5.7 pour la désélectionation
  Préparation du dépaquetage de .../mysql-server-core-5.7_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Dépaquetage de .../mysql-server-core-5.7_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Préparation du dépaquetage de .../mysql-server-5.7_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Dépaquetage de .../mysql-server-5.7_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Sélection du paquet libtbbmalloc-perl précédentement désélectionné.
  Préparation du dépaquetage de .../libtbbmalloc-perl_2.95-2_amd64.deb ...
  Dépaquetage de libtbbmalloc-perl_2.95-2_amd64.deb ...
  Préparation du dépaquetage de mysql-server_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Dépaquetage de mysql-server_5.7.33-0ubuntu10.64.1_amd64.deb ...
  Traitement des actions différées (= 7 triggers) pour ureadahead (0.100.0-19.1)...
  Traitement des actions différées (= 7 triggers) pour libcurl4-openssl-dev (7.61.1-1)...
  Paramétrage de mysql-server-core-5.7 (5.7.33-0ubuntu10.64.1)...
  Paramétrage de mysql-server-5.7 (5.7.33-0ubuntu10.64.1)...
  Utilisation de /etc/mysql/my.cnf = pourournir à /etc/mysql/my.cnf + (my.cnf) en mode automatique
  Utilisation de /etc/mysql/mysql.conf.d/mysqld.cnf = pourournir à /etc/mysql/mysql.conf.d/mysqld.cnf + (mysqld.cnf) en mode automatique

Renomme réécrit key_buffer et my.cnf-reader (lire présent)
Paramétrage de mysql (5.7.33-0ubuntu10.64.1)...
  Traitement des actions différées (= 7 triggers) pour ureadahead (0.100.0-19.1)...
  Traitement des actions différées (= 7 triggers) pour libcurl4-openssl-dev (7.61.1-1)...
```

```
khaoula@ubuntu:~$ sudo mysql -u root -p
[sudo] Mot de passe de khaoula :
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.33-0ubuntu0.16.04.1 (Ubuntu)

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

Base de donnée

login to database et faire un test puis la création database de test et créer des tables

→ Créez une base de données fictive. Ici, nous l'appelons **test**

→ On peut aussi importer le fichier SQL d'exemple en utilisant cette commande " SOURCE /etc/sphinxsearch/example.sql;"

```

DROP TABLE IF EXISTS test.documents;
CREATE TABLE test.documents
(
    id      INTEGER PRIMARY KEY NOT NULL AUTO_INCREMENT,
    group_id  INTEGER NOT NULL,
    group_id2 INTEGER NOT NULL,
    date_added DATETIME NOT NULL,
    title    VARCHAR(255) NOT NULL,
    content   TEXT NOT NULL
);
REPLACE INTO test.documents ( id, group_id, group_id2, date_added, title, content ) VALUES
    ( 1, 1, 5, NOW(), 'test one', 'this is my test document number one. also checking search within phrases.' ),
    ( 2, 1, 6, NOW(), 'test two', 'this is my test document number two' ),
    ( 3, 2, 7, NOW(), 'another doc', 'this is another group' ),
    ( 4, 2, 8, NOW(), 'doc number four', 'this is to test groups' );
DROP TABLE IF EXISTS test.tags;
CREATE TABLE test.tags
(
    docid INTEGER NOT NULL,
    tagid INTEGER NOT NULL,
    UNIQUE(docid,tagid)
);
INSERT INTO test.tags VALUES
    (1,1), (1,3), (1,5), (1,7),
    (2,6), (2,4), (2,2),
    (3,15),
    (4,7), (4,40);

```

⇒ 2 tables "documents and tags" in `test` database :

→ insert some sample data into these tables

- let's break down this part of the file and understand the main concept for document table :

- 6 columns and 4 rows that contain the data

Rappel sur commande SQL:

- rappel : **REPLACE INTO**: This command inserts new rows into the `documents` table or replaces any existing rows with the same `id`.
- The `NOW()` function is used to insert the current date and time in the `date_added` field.

- for the second table "tags table"

- **UNIQUE(docid, tagid)**: Ensures that each document can have multiple tags, but a particular tag can only appear once for each document.

```

mysql> DROP TABLE IF EXISTS test.documents;
Query OK, 0 rows affected, 1 warning (0.36 sec)

mysql> create database if not exists test;
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> use test;
Database changed
mysql> CREATE TABLE test.documents
-> (
->     id INTEGER PRIMARY KEY NOT NULL AUTO_INCREMENT,
->     group_id INTEGER NOT NULL,
->     group_id2 INTEGER NOT NULL,
->     date_added DATETIME NOT NULL,
->     title VARCHAR(255) NOT NULL,
->     content TEXT NOT NULL
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version
for the right syntax to use near 'PRIMARY KEY NOT NULL AUTO_INCREMENT,
group_id INTEGER NOT NULL,
group_id2 INTEGER ' at line 3
mysql> CREATE TABLE test.documents ( id INTEGER PRIMARY KEY NOT NULL AUTO_INCREMENT, group_id INTEGER NOT NULL, group_id2
2 INTEGER NOT NULL, date_added DATETIME NOT NULL, title VARCHAR(255) NOT NULL, content TEXT NOT NULL );
Query OK, 0 rows affected (0.17 sec)

mysql>

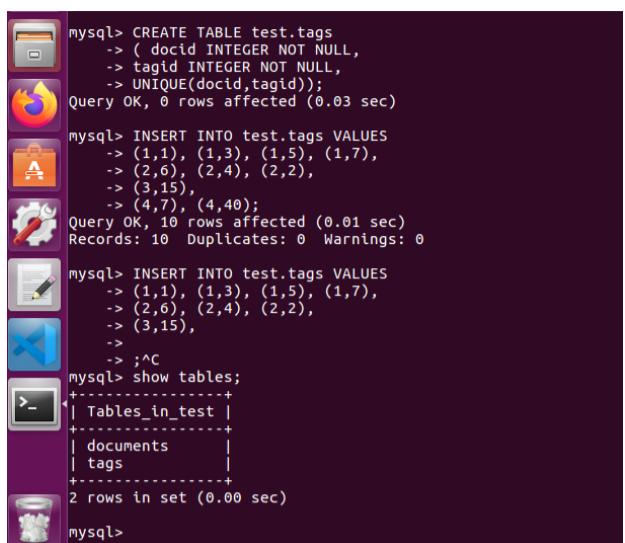
```

```

mysql> REPLACE INTO test.documents ( id, group_id, group_id2, date_added, title, content ) VALUES
-> ( 1, 1, 5, NOW(), 'test one', 'this is my test document number one. also checking search within phrases.' ),
-> ( 2, 1, 6, NOW(), 'test two', 'this is my test document number two' ),
-> ( 3, 2, 7, NOW(), 'another doc', 'this is another group' ),
-> ( 4, 2, 8, NOW(), 'doc number four', 'this is to test groups' );
Query OK, 4 rows affected (0.05 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql>

```



```

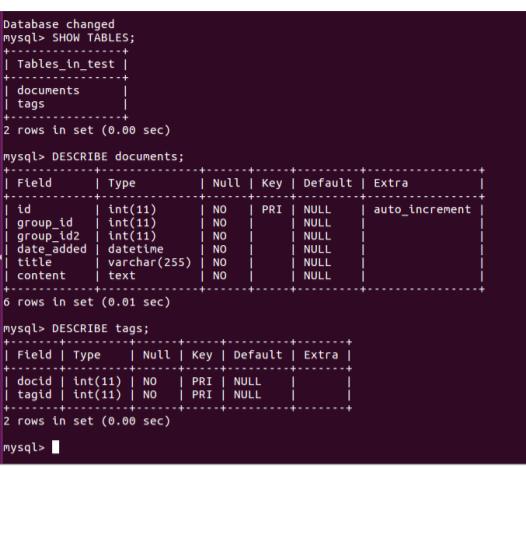
mysql> CREATE TABLE test.tags
-> ( docid INTEGER NOT NULL,
-> tagid INTEGER NOT NULL,
-> UNIQUE(docid,tagid));
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO test.tags VALUES
-> (1,1), (1,3), (1,5), (1,7),
-> (2,6), (2,4), (2,2),
-> (3,15),
-> (4,7), (4,40);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> INSERT INTO test.tags VALUES
-> (1,1), (1,3), (1,5), (1,7),
-> (2,6), (2,4), (2,2),
-> (3,15),
->
mysql> show tables;
+-----+
| Tables_in_test |
+-----+
| documents |
| tags |
+-----+
2 rows in set (0.00 sec)

mysql> ^C

```



```

database changed
mysql> SHOW TABLES;
+-----+
| Tables_in_test |
+-----+
| documents |
| tags |
+-----+
2 rows in set (0.00 sec)

Mysql> DESCRIBE documents;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id | int(11) | NO | PRI | NULL | auto_increment |
| group_id | int(11) | NO | NULL | NULL | |
| group_id2 | int(11) | NO | NULL | NULL | |
| date_added | datetime | NO | NULL | NULL | |
| title | varchar(255) | NO | NULL | NULL | |
| content | text | NO | NULL | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

Mysql> DESCRIBE tags;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| docid | int(11) | NO | PRI | NULL | |
| tagid | int(11) | NO | PRI | NULL | |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> ^C

```

Gestion des index

Commande à utiliser

```

sudo indexer --all --rotate
crontab -e
/usr/bin/indexer --rotate --config /etc/sphinxsearch/sphinx.conf --all
sudo sed -i 's/START=no/START=yes/g' /etc/default/sphinxsearch
sudo systemctl restart sphinxsearch.service
sudo systemctl status sphinxsearch.service

```

```

khaoula@ubuntu:~$ sudo indexer --all --rotate
Sphinx 2.2.11-id64-release (95ae9a6)
Copyright (c) 2001-2016, Andrew Aksyonoff
Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinxsearch.com)

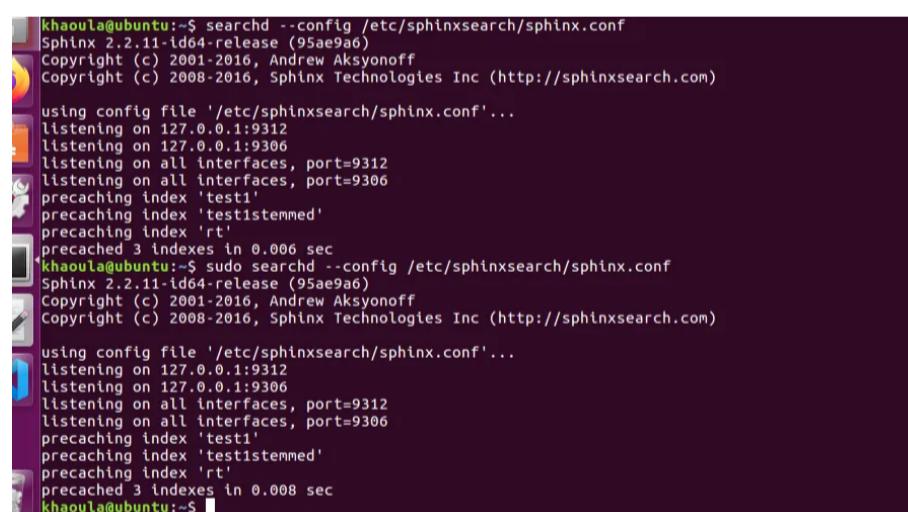
using config file '/etc/sphinxsearch/sphinx.conf'...
Indexing Index 'test1'...
WARNING: attribute 'date_added' not found - IGNORING
collected 4 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 4 docs, 197 bytes
total 0.015 sec, 12946 bytes/sec, 262.86 docs/sec
indexing index 'index_auteurs_stemmed'...
collected 8 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 8 docs, 811 bytes
total 0.005 sec, 144511 bytes/sec, 1425.51 docs/sec
indexing index 'index_livres'...
collected 14 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 14 docs, 1285 bytes
total 0.009 sec, 142051 bytes/sec, 1547.64 docs/sec
indexing index 'testistemmed'...
WARNING: attribute 'date_added' not found - IGNORING
collected 4 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 4 docs, 197 bytes
total 0.003 sec, 60578 bytes/sec, 1230.01 docs/sec
indexing index 'test2stemmed'...
collected 14 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 14 docs, 1285 bytes
total 0.003 sec, 142051 bytes/sec, 1547.64 docs/sec
indexing index 'test3stemmed'...
collected 4 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 4 docs, 197 bytes
total 0.003 sec, 60578 bytes/sec, 1230.01 docs/sec
indexing index 'test4stemmed'...
collected 14 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 14 docs, 1285 bytes
total 0.002 sec, 434415 bytes/sec, 4732.92 docs/sec
skipping non-plain index 'dist1'...
skipping non-plain index 'rt'...
total 88 reads, 0.000 sec, 0.2 kb/call avg, 0.0 msec/call avg
total 72 writes, 0.002 sec, 0.4 kb/call avg, 0.0 msec/call avg
rotating indices: successfully sent SIGHUP to searchd (pid=16560).
khaoula@ubuntu:~$ 

```

```

collected 8 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 8 docs, 811 bytes
total 0.005 sec, 144511 bytes/sec, 1425.51 docs/sec
indexing index 'index_livres'...
collected 14 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 14 docs, 1285 bytes
total 0.009 sec, 142051 bytes/sec, 1547.64 docs/sec
indexing index 'testistemmed'...
WARNING: attribute 'date_added' not found - IGNORING
collected 4 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 4 docs, 197 bytes
total 0.003 sec, 60578 bytes/sec, 1230.01 docs/sec
indexing index 'test2stemmed'...
collected 8 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 8 docs, 811 bytes
total 0.004 sec, 201240 bytes/sec, 1985.11 docs/sec
indexing index 'test3stemmed'...
collected 14 docs, 0.0 MB
sorted 0.0 Mhits, 100.0% done
total 14 docs, 1285 bytes
total 0.002 sec, 434415 bytes/sec, 4732.92 docs/sec
skipping non-plain index 'dist1'...
skipping non-plain index 'rt'...
total 88 reads, 0.000 sec, 0.2 kb/call avg, 0.0 msec/call avg
total 72 writes, 0.002 sec, 0.4 kb/call avg, 0.0 msec/call avg
rotating indices: successfully sent SIGHUP to searchd (pid=16560).
khaoula@ubuntu:~$ 

```



```

khaoula@ubuntu:~$ searchd --config /etc/sphinxsearch/sphinx.conf
Sphinx 2.2.11-id64-release (95ae9a6)
Copyright (c) 2001-2016, Andrew Aksyonoff
Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinxsearch.com)

using config file '/etc/sphinxsearch/sphinx.conf'...
listening on 127.0.0.1:9302
listening on all interfaces, port=9312
listening on all interfaces, port=9306
pre caching index 'test1'
pre caching index 'testistemmed'
pre caching index 'rt'
pre cached 3 indexes in 0.006 sec
khaoula@ubuntu:~$ sudo searchd --config /etc/sphinxsearch/sphinx.conf
Sphinx 2.2.11-id64-release (95ae9a6)
Copyright (c) 2001-2016, Andrew Aksyonoff
Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinxsearch.com)

using config file '/etc/sphinxsearch/sphinx.conf'...
listening on 127.0.0.1:9302
listening on all interfaces, port=9312
listening on all interfaces, port=9306
pre caching index 'test1'
pre caching index 'testistemmed'
pre caching index 'rt'
pre cached 3 indexes in 0.008 sec
khaoula@ubuntu:~$ 

```

⇒ start Sphinxsearch

```
sudo /usr/bin/indexer --rotate --config /etc/sphinxsearch/sphinx.conf --all
```

le démon Sphinx est désactivé. Tout d'abord, nous allons l'activer en modifiant la ligne

```
sudo sed -i 's/START=no/START=yes/g' /etc/default/sphinxsearch
```

utilisez `systemctl` pour redémarrer le démon Sphinx

```
sudo systemctl restart sphinxsearch.service
```

```
sudo systemctl status sphinxsearch.service
```

```
khaoula@ubuntu:~$ crontab -e
no crontab for khaoula - using an empty one

Select an editor. To change later, run 'select-editor'.
 1. /bin/ed
 2. /bin/nano      <---- easiest
 3. /usr/bin/vim.tiny

Choose 1-3 [2]: 2
crontab: installing new crontab
```

```
khaoula@ubuntu:~$ sudo sed -i 's/START=no/START=yes/g' /etc/default/sphinxsearch
khaoula@ubuntu:~$ sudo systemctl restart sphinxsearch.service
● sphinxsearch.service - SphinxSearch Search Engine
   Loaded: loaded (/lib/systemd/system/sphinxsearch.service; disabled; vendor preset: enabled)
   Active: active (running) since lun. 2024-12-09 12:04:10 PST; 12s ago
     Process: 2560 ExecStart=/usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf (code=exited, status=0)
    Process: 2555 ExecStartPre=/bin/chown sphinxsearch.sphinxsearch /var/run/sphinxsearch (code=exited, s
    Process: 2554 ExecStartPre=/bin/mkdir -p /var/run/sphinxsearch (code=exited, status=0/SUCCESS)
   Main PID: 2564 (searchd)
      CGroup: /system.slice/sphinxsearch.service
              └─2563 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf
                  ├─2564 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf

déc. 09 12:04:10 ubuntu searchd[2560]: listening on all interfaces, port=9312
déc. 09 12:04:10 ubuntu searchd[2560]: listening on all interfaces, port=9306
déc. 09 12:04:10 ubuntu searchd[2560]: Sphinx 2.2.11-id64-release (95ae9a6)
déc. 09 12:04:10 ubuntu searchd[2560]: Copyright (c) 2001-2016, Andrew Aksyonoff
déc. 09 12:04:10 ubuntu searchd[2560]: Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinx
déc. 09 12:04:10 ubuntu searchd[2560]: precaching index 'test1'
déc. 09 12:04:10 ubuntu searchd[2560]: [2188 blob data]
déc. 09 12:04:10 ubuntu searchd[2560]: [2088 blob data]
déc. 09 12:04:10 ubuntu systemd[1]: sphinxsearch.service: Supervising process 2564 which is not our chi
déc. 09 12:04:10 ubuntu systemd[1]: Started SphinxSearch Search Engine.
Lines 1-21/21 (END)
```

```
● sphinxsearch.service - SphinxSearch Search Engine
   Loaded: loaded (/lib/systemd/system/sphinxsearch.service; disabled; vendor preset: enabled)
   Active: active (running) since lun. 2024-12-09 12:04:10 PST; 12s ago
     Process: 2560 ExecStart=/usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf (code=exited, status=0)
    Process: 2555 ExecStartPre=/bin/chown sphinxsearch.sphinxsearch /var/run/sphinxsearch (code=exited, s
    Process: 2554 ExecStartPre=/bin/mkdir -p /var/run/sphinxsearch (code=exited, status=0/SUCCESS)
   Main PID: 2564 (searchd)
      CGroup: /system.slice/sphinxsearch.service
              └─2563 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf
                  ├─2564 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf

déc. 09 12:04:10 ubuntu searchd[2560]: listening on all interfaces, port=9312
déc. 09 12:04:10 ubuntu searchd[2560]: listening on all interfaces, port=9306
déc. 09 12:04:10 ubuntu searchd[2560]: Sphinx 2.2.11-id64-release (95ae9a6)
déc. 09 12:04:10 ubuntu searchd[2560]: Copyright (c) 2001-2016, Andrew Aksyonoff
déc. 09 12:04:10 ubuntu searchd[2560]: Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinx
déc. 09 12:04:10 ubuntu searchd[2560]: precaching index 'test1'
déc. 09 12:04:10 ubuntu searchd[2560]: [2188 blob data]
déc. 09 12:04:10 ubuntu searchd[2560]: [2088 blob data]
déc. 09 12:04:10 ubuntu systemd[1]: sphinxsearch.service: Supervising process 2564 which is not our chi
déc. 09 12:04:10 ubuntu systemd[1]: Started SphinxSearch Search Engine.
Lines 1-21/21 (END)... skipping...
● sphinxsearch.service - SphinxSearch Search Engine
   Loaded: loaded (/lib/systemd/system/sphinxsearch.service; disabled; vendor preset: enabled)
   Active: active (running) since lun. 2024-12-09 12:04:10 PST; 12s ago
     Process: 2560 ExecStart=/usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf (code=exited, status=0)
    Process: 2555 ExecStartPre=/bin/chown sphinxsearch.sphinxsearch /var/run/sphinxsearch (code=exited, s
    Process: 2554 ExecStartPre=/bin/mkdir -p /var/run/sphinxsearch (code=exited, status=0/SUCCESS)
   Main PID: 2564 (searchd)
      CGroup: /system.slice/sphinxsearch.service
              └─2563 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf
                  ├─2564 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf
```

⇒ Tester

testons la fonctionnalité de recherche. Connectez-vous à SphinxQL (sur le port 9306) en utilisant l'interface MySQL

 requete sql :

```
sudo mysql mysql -u root -p : "pour requete sql simple"
sudo mysql -h0 -P9306
SELECT * FROM test1 WHERE MATCH('test document');
SHOW META;
CALL KEYWORDS ('test one three', 'test1', 1);
```

```

khaoula@ubuntu:~$ sudo mysql -h0 -P9306
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1
Server version: 2.2.11-id64-release (95ae9a6)

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> SELECT * FROM test1 WHERE MATCH('test document');
+----+-----+
| id | group_id | title |
+----+-----+
| 1  | 1        | test one |
| 2  | 1        | test two |
+----+-----+
2 rows in set (0.01 sec)

```

```

mysql> SHOW META;
+-----+-----+
| Variable_name | Value   |
+-----+-----+
| total          | 2       |
| total_found    | 2       |
| time           | 0.017   |
| keyword[0]     | test    |
| docs[0]         | 3       |
| hits[0]         | 5       |
| keyword[1]     | document|
| docs[1]         | 2       |
| hits[1]         | 2       |
+-----+-----+
9 rows in set (0.01 sec)

```

```

mysql> SHOW TABLES;
ERROR 2006 (HY000): MySQL server has gone away
No connection. Trying to reconnect...
Connection id: 1
Current database: *** NONE ***
+-----+-----+
| Index | Type  |
+-----+-----+
| dist1 | distributed |
| rt    | rt    |
| test1 | local |
| testistemmed | local |
+-----+-----+
4 rows in set (0.01 sec)

```

Explication des types de tables :

- **distributed** : Ces tables sont utilisées pour gérer des données distribuées dans un cluster Sphinx. Les données sont généralement réparties entre plusieurs nœuds de recherche.
- **local** : Ces tables sont des indices locaux utilisés pour stocker des données spécifiques à un nœud.
- **rt** : Ce type d'index est utilisé pour les données en temps réel. Il permet une insertion rapide et des recherches immédiates.

```

mysql> CALL KEYWORDS ('test one three', 'test1', 1);
+-----+-----+-----+-----+
| qpos | tokenized | normalized | docs | hits |
+-----+-----+-----+-----+
| 1    | test      | test      | 3    | 5    |
| 2    | one       | one       | 1    | 2    |
| 3    | three     | three     | 0    | 0    |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

vous pouvez voir que dans l' index **test1** , Sphinx a trouvé :

- 5 correspondances dans 3 documents pour le mot clé 'test'
- 2 correspondances dans 1 document pour le mot clé « one »
- 0 correspondances dans 0 documents pour le mot clé « trois »

⇒ La procédure **KEYWORDS** est utilisée pour analyser une chaîne de texte et fournir des informations sur les mots-clés en termes de fréquence dans l'index, de nombre de documents dans lesquels ils apparaissent et de nombre total de hits (occurrences) dans ces documents.

- **hits** : Ce chiffre représente le nombre d'occurrences d'un mot dans les documents où il est trouvé.

- **normalized** : Ce sont les mots "normalisés", qui ont été traités pour réduire les variations.

```

mysql> SELECT id, title, bio FROM index_auteurs_stemmed WHERE MATCH('connu');
ERROR 1064 (42000): index index_auteurs_stemmed: parse error: unknown column: bi
o
mysql> SELECT id, title, bio FROM index_auteurs_stemmed WHERE MATCH('connu');
+----+-----+
| id | title | bio |
+----+-----+
| 1 | Victor Hugo | Un des écrivains les plus célèbres du XIXe siècle, connu pour ses œuvres comme Les Misérables. |
| 2 | Marcel Proust | Romancier français, surtout connu pour son œuvre La recherche du temps perdu. |
| 4 | J.K. Rowling | Auteur britannique, connue pour sa série de livres Harry Potter. |
| 5 | Albert Camus | Philosophie et écrivain français, connu pour ses livres comme L'Étranger et La Peste. |
| 6 | Jane Austen | Romancière anglaise, connue pour ses ouvrages comme Orgueil et Préjugés et Raison et Sentiments. |
| 7 | Isaac Asimov | Auteur américain de science-fiction, connu pour la série Fondation et pour ses ouvrages scientifiques. |
| 8 | Gabriel García Márquez | Écrivain colombien, lauréat du prix Nobel de littérature, connu pour son livre Cent ans de solitude. |
+----+-----+
7 rows in set (0.00 sec)

mysql>

```

id	group_id	title
1	1	test one
2	1	test two

2 rows in set (0.01 sec)

id	group_id	title
4	2	doc number four
2	1	test two
1	1	test one

3 rows in set (0.00 sec)

id	group_id	title
1	1	test one

1 row in set (0.00 sec)

SphinxSearch avec PHP

commande pour installer php et apache : `sudo apt install php libapache2-mod-php`

```

byc
khaoula@ubuntu:~$ sudo apt install php libapache2-mod-php
[sudo] Mot de passe de khaoula :
Lecture des listes de paquets... Fait
Construction de l'arbre des dépendances
Lecture des informations d'état... Fait
libapache2-mod-php est déjà la version la plus récente (1:7.0+35ubuntu6.1).
php est déjà la version la plus récente (1:7.0+35ubuntu6.1).
Le paquet suivant a été installé automatiquement et n'est plus nécessaire :
 libreadline5
Veuillez utiliser « sudo apt autoremove » pour le supprimer.
0 mis à jour, 0 nouvellement installés, 0 à enlever et 0 non mis à jour.
khaoula@ubuntu:~$ 

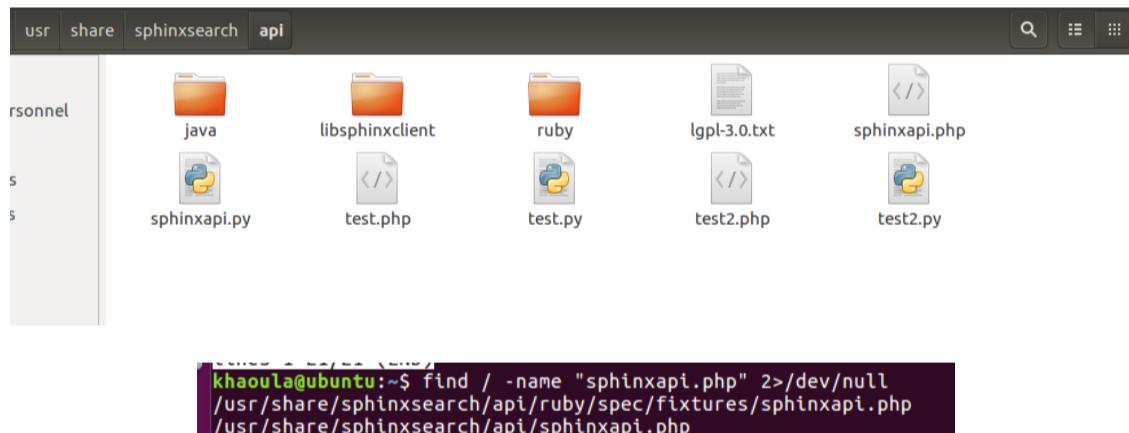
```

```

khaoula@ubuntu:~$ find / -name "sphinxapi.php" 2>/dev/null
/usr/share/sphinxsearch/api/ruby/spec/fixtures/sphinxapi.php
/usr/share/sphinxsearch/api/sphinxapi.php

```

⇒ Pour savoir s'il ya sphinx php part



```

khaoula@ubuntu:~$ find / -name "sphinxapi.php" 2>/dev/null
/usr/share/sphinxsearch/api/ruby/spec/fixtures/sphinxapi.php
/usr/share/sphinxsearch/api/sphinxapi.php

```

⇒ Pour faire activer apache "serveur web "pour faire des recherches

`sudo systemctl restart apache2`

`sudo systemctl status apache2` : pour faire verifier si apache est active ou bien pas

```

khaoula@ubuntu:~$ sudo systemctl restart apache2
khaoula@ubuntu:~$ sudo systemctl status apache2
● apache2.service - LSB: Apache2 web server
   Loaded: loaded (/etc/init.d/apache2; bad; vendor preset: enabled)
   Drop-In: /lib/systemd/system/apache2.service.d
             └─apache2-systemd.conf
     Active: active (running) since dim. 2024-12-15 10:17:34 PST; 5min ago
       Docs: man:systemd-sysv-generator(8)
    Process: 5977 ExecStop=/etc/init.d/apache2 stop (code=exited, status=0/SUCCESS)
   Process: 6001 ExecStart=/etc/init.d/apache2 start (code=exited, status=0/SUCCESS)
   CGroup: /system.slice/apache2.service
           ├─6017 /usr/sbin/apache2 -k start
           ├─6020 /usr/sbin/apache2 -k start
           ├─6021 /usr/sbin/apache2 -k start
           ├─6022 /usr/sbin/apache2 -k start
           ├─6023 /usr/sbin/apache2 -k start
           └─6024 /usr/sbin/apache2 -k start

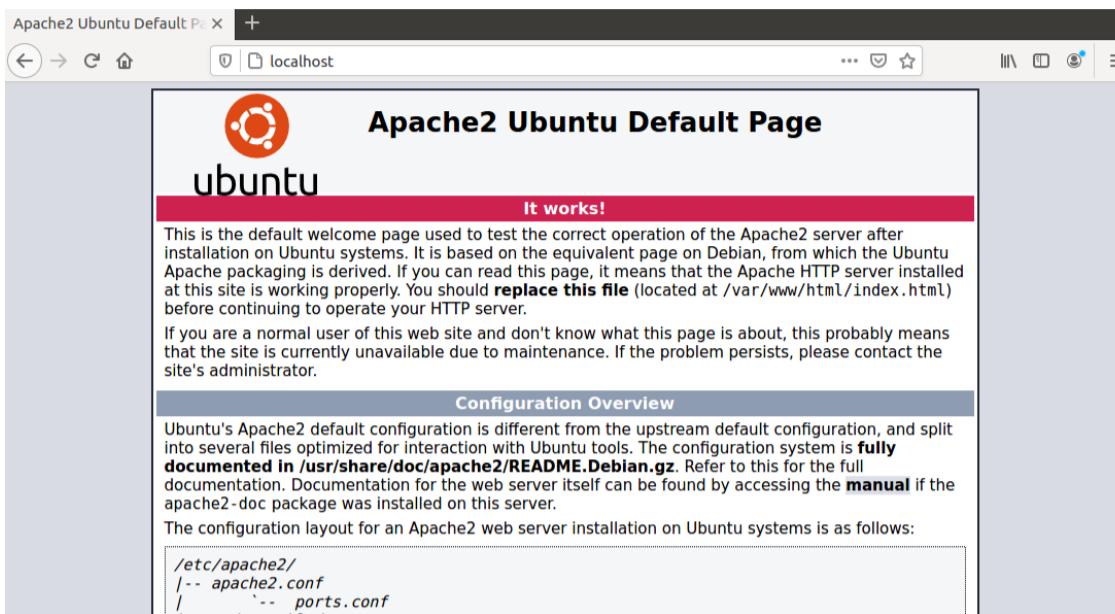
déc. 15 10:17:31 ubuntu systemd[1]: Starting LSB: Apache2 web server...
déc. 15 10:17:31 ubuntu apache2[6001]: * Starting Apache httpd web server apach
déc. 15 10:17:32 ubuntu apache2[6001]: AH00558: apache2: Could not reliably determ
déc. 15 10:17:34 ubuntu apache2[6001]: *
déc. 15 10:17:34 ubuntu systemd[1]: Started LSB: Apache2 web server.
lines 1-21/21 (END)

```

pour faire verifier que php est installer et tout "php -v"

```
khaoula@ubuntu:~$ php -v
PHP 7.0.33-0ubuntu0.16.04.16 (cli) ( NTS )
Copyright (c) 1997-2017 The PHP Group
Zend Engine v3.0.0, Copyright (c) 1998-2017 Zend Technologies
    with Zend OPcache v7.0.33-0ubuntu0.16.04.16, Copyright (c) 1999-2017, by Zen
d Technologies
khaoula@ubuntu:~$
```

⇒ pour localhost savoir d'apache si sa marche "http://localhost"



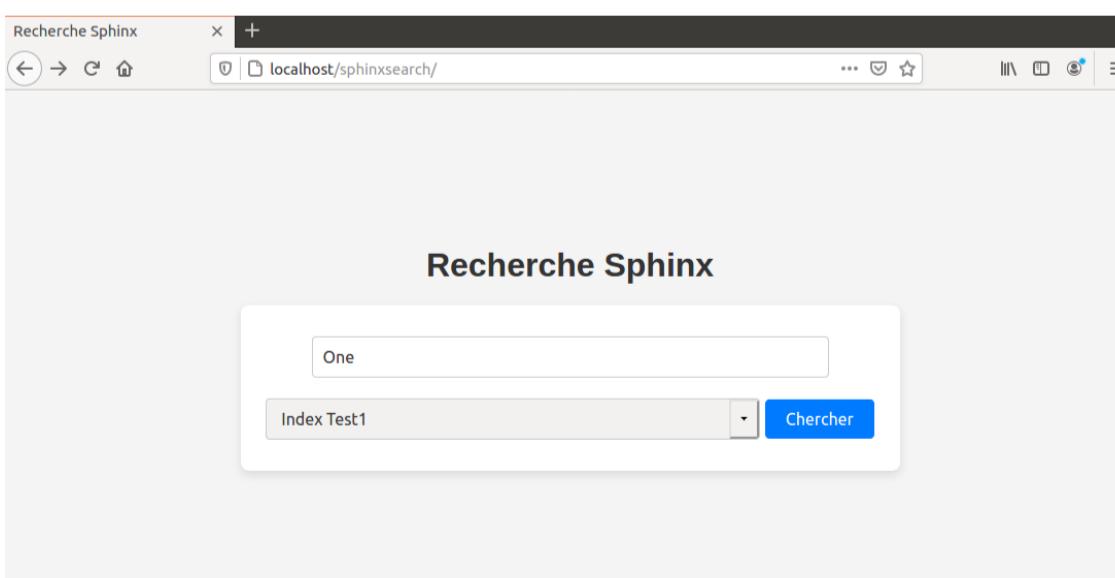
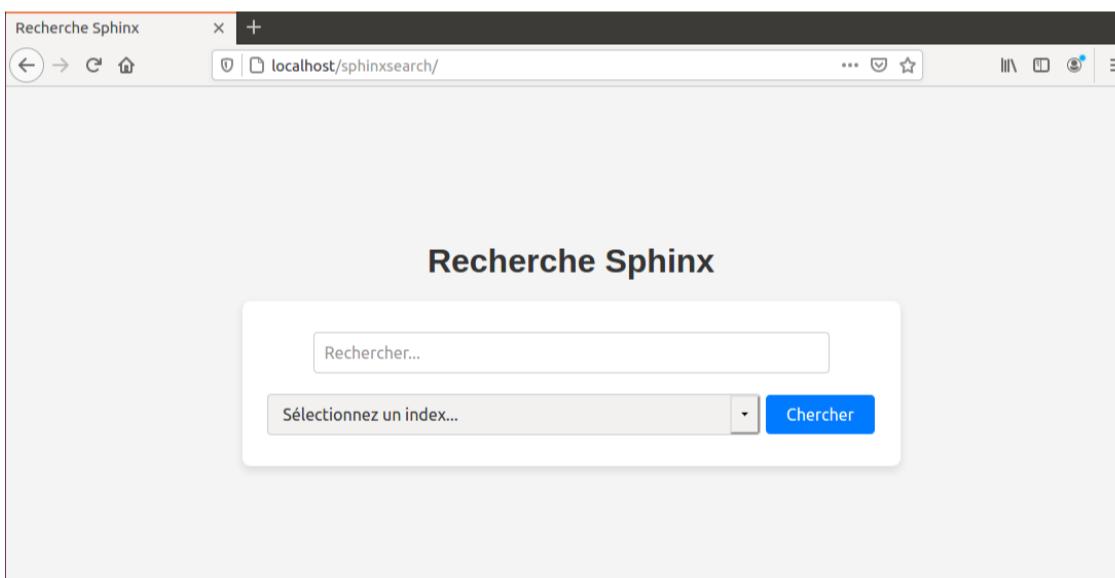
⇒ sudo mv /home/khaoula/Documents/search.php /var/www/html/

pour déplacer le fichier qui contient infos d'indexation de php sphinx vers l'emplacement

sudo mv /var/www/html/search.php /var/www/html/sphinxsearch/

```
khaoula@ubuntu:~$ sudo systemctl restart apache2
khaoula@ubuntu:~$ sudo mv /home/khaoula/Documents/search.php /var/www/html/
khaoula@ubuntu:~$ sudo mv /home/khaoula/Documents/index.html /var/www/html/
khaoula@ubuntu:~$
```

⇒ L'affichage après de correction et configuration la partie de php



localhost/sphinxsearch/search.php?q=One&index=test1

Executing SQL for index index_livres: SELECT * FROM `index_livres` WHERE MATCH('One') LIMIT 20
Executing SQL for index index_auteurs_stemmed: SELECT * FROM `index_auteurs_stemmed` WHERE MATCH('One') LIMIT 20
Executing SQL for index test1: SELECT * FROM `test1` WHERE MATCH('One') LIMIT 20
<pre>Array

```
[0] => Array
  (
    [index] => index_livres
    [message] => Aucun résultat trouvé dans l'index index_livres.
  )
[1] => Array
  (
    [index] => index_auteurs_stemmed
    [message] => Aucun résultat trouvé dans l'index index_auteurs_stemmed.
  )
[2] => Array
  (
    [index] => test1
    [data] => Array
      (
        [0] => Array
          (
            [title] => test one
            [group_id] => 1
          )
      )
    )
)
</pre>[{"index":"index_livres","message":"Aucun r\u00e9sultat trouv\u00e9 dans l'index index_livres."}, {"index":"index_auteurs_stemmed","message":"Aucun r\u00e9sultat trouv\u00e9 dans l'index index_auteurs_stemmed."}, {"index":"test1","data":[{"title":"test one","group_id":1}]}]
```

localhost/sphinxsearch/search.php?q=Roman&index=index_livres

Executing SQL for index index_livres: SELECT * FROM `index_livres` WHERE MATCH('Roman') LIMIT 20
Executing SQL for index index_auteurs_stemmed: SELECT * FROM `index_auteurs_stemmed` WHERE MATCH('Roman') LIMIT 20
Executing SQL for index test1: SELECT * FROM `test1` WHERE MATCH('Roman') LIMIT 20
<pre>Array

```
[0] => Array
  (
    [index] => index_livres
    [data] => Array
      (
        [0] => Array
          (
            [title] => Les Misérables
            [description] => Roman sur la misère et la rédemption.
          )
        [1] => Array
          (
            [title] => 1984
            [description] => Roman dystopique sur la surveillance et la totalitarisme.
          )
        [2] => Array
          (
            [title] => Les Misérables
            [description] => Roman sur la misère et la rédemption.
          )
        [3] => Array
          (
            [title] => L'Étranger
            [description] => Un roman philosophique sur l'absurde et l'existentialisme, écrit par Albert Camus.
          )
        [4] => Array
          (
            [title] => La Peste
            [description] => Roman sur la peste et la mort dans la ville de Marseille.
          )
      )
    )
)
</pre>[{"index":"index_livres","data":[{"title":"Les Misérables","description":"Roman sur la misère et la rédemption."}], {"index":"index_auteurs_stemmed","data":[{"title":"1984","description":"Roman dystopique sur la surveillance et la totalitarisme."}], {"index":"index_auteurs_stemmed","data":[{"title":"Les Misérables","description":"Roman sur la misère et la rédemption."}], {"index":"test1","data":[{"title":"L'Étranger","description":"Un roman philosophique sur l'absurde et l'existentialisme, écrit par Albert Camus."}], {"index":"test1","data":[{"title":"La Peste","description":"Roman sur la peste et la mort dans la ville de Marseille."}]}]
```



Conclusion les étapes :

- installation de Sphinx , sphinxsearch , mysql
 - Correction le fichier de configuration
 - Activation de sphinxsearch pour démarrer la recherche :
 - sudo /usr/bin/indexer --rotate --config /etc/sphinxsearch/sphinx.conf --all
- le démon Sphinx est désactivé. Tout d'abord, nous allons l'activer en modifiant la ligne
- sudo sed -i 's/START=no/START=yes/g' /etc/default/sphinxsearch
- utilisez `systemctl` pour redémarrer le démon Sphinx
- sudo systemctl restart sphinxsearch.service
 - sudo systemctl status sphinxsearch.service

```
khaoula@ubuntu:~$ sudo sed -i 's/START=no/START=yes/g' /etc/default/sphinxsearch
khaoula@ubuntu:~$ sudo systemctl restart sphinxsearch.service
khaoula@ubuntu:~$ sudo systemctl status sphinxsearch.service
● sphinxsearch.service - SphinxSearch Search Engine
   Loaded: loaded (/lib/systemd/system/sphinxsearch.service; disabled; vendor pr
   Active: active (running) since sam. 2025-01-04 02:06:15 PST; 8s ago
     Process: 3354 ExecStart=/usr/bin/searchd --config /etc/sphinxsearch/sphinx.con
     Process: 3350 ExecStartPre=/bin/chown sphinxsearch.sphinxsearch /var/run/sphin
     Process: 3347 ExecStartPre=/bin/mkdir -p /var/run/sphinxsearch (code=exited, s
   Main PID: 3357 (searchd)
      CGroup: /system.slice/sphinxsearch.service
              └─3356 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf
                  ├─3357 /usr/bin/searchd --config /etc/sphinxsearch/sphinx.conf

janv. 04 02:06:15 ubuntu searchd[3354]: [225B blob data]
janv. 04 02:06:15 ubuntu searchd[3354]: precaching index 'test1stemmed'
janv. 04 02:06:15 ubuntu searchd[3354]: [225B blob data]
janv. 04 02:06:15 ubuntu searchd[3354]: precaching index 'test2stemmed'
janv. 04 02:06:15 ubuntu searchd[3354]: [225B blob data]
janv. 04 02:06:15 ubuntu searchd[3354]: precaching index 'test3stemmed'
janv. 04 02:06:15 ubuntu searchd[3354]: [225B blob data]
janv. 04 02:06:15 ubuntu searchd[3354]: precaching index 'rt'
janv. 04 02:06:15 ubuntu systemd[1]: sphinxsearch.service: Supervising process 3
janv. 04 02:06:15 ubuntu systemd[1]: Started SphinxSearch Search Engine.
lines 1-21/21 (END)...skipping...
● sphinxsearch.service - SphinxSearch Search Engine
   Loaded: loaded (/lib/systemd/system/sphinxsearch.service; disabled; vendor pr
   Active: active (running) since sam. 2025-01-04 02:06:15 PST; 8s ago
     Process: 3354 ExecStart=/usr/bin/searchd --config /etc/sphinxsearch/sphinx.con
     Process: 3350 ExecStartPre=/bin/chown sphinxsearch.sphinxsearch /var/run/sphin
     Process: 3347 ExecStartPre=/bin/mkdir -p /var/run/sphinxsearch (code=exited, s
   Main PID: 3357 (searchd)
      CGroup: /system.slice/sphinxsearch.service
```

→ Connectez-vous à SphinxQL (sur le port 9306) en utilisant l'interface MySQL:

- sudo mysql -h0 -P9306

```
khaoula@ubuntu:~$ sudo mysql -h0 -P9306
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 1
Server version: 2.2.11-id64-release (95ae9a6)

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> █
```

→ activer apache "serveur web "pour faire des recherches

- sudo systemctl restart apache2
- sudo systemctl status apache2

```

khaoula@ubuntu:~$ sudo systemctl restart apache2
[sudo] Mot de passe de khaoula :
khaoula@ubuntu:~$ sudo systemctl status apache2
● apache2.service - LSB: Apache2 web server
  Loaded: loaded (/etc/init.d/apache2; bad; vendor preset: enabled)
  Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
    Active: active (running) since sam. 2025-01-04 02:19:03 PST; 14s ago
      Docs: man:systemd-sysv-generator(8)
   Process: 3528 ExecStop=/etc/init.d/apache2 stop (code=exited, status=0/SUCCESS)
   Process: 3099 ExecReload=/etc/init.d/apache2 reload (code=exited, status=0/SUCCESS)
  Process: 3553 ExecStart=/etc/init.d/apache2 start (code=exited, status=0/SUCCESS)
    CGroup: /system.slice/apache2.service
            ├─3571 /usr/sbin/apache2 -k start
            ├─3574 /usr/sbin/apache2 -k start
            ├─3575 /usr/sbin/apache2 -k start
            ├─3576 /usr/sbin/apache2 -k start
            ├─3577 /usr/sbin/apache2 -k start
            └─3578 /usr/sbin/apache2 -k start

janv. 04 02:19:01 ubuntu systemd[1]: Starting LSB: Apache2 web server...
janv. 04 02:19:01 ubuntu apache2[3553]: * Starting Apache httpd web server apache2
janv. 04 02:19:02 ubuntu apache2[3553]: AH00558: apache2: Could not reliably determine
janv. 04 02:19:03 ubuntu apache2[3553]: *
janv. 04 02:19:03 ubuntu systemd[1]: Started LSB: Apache2 web server.
lines 1-22/22 (END)

```

Ressources

▼ Link sphinx

https://inspe-sciedu.gricad-pages.univ-grenoble-alpes.fr/reflexpro/installer_sphinx.html

<https://www.sphinx-doc.org/fr/master/tutorial/first-steps.html>

<https://www.sphinx-doc.org/fr/master/tutorial/>

<https://www.sphinx-doc.org/fr/master/tutorial/first-steps.html>

<https://www.sphinx-doc.org/en/master/tutorial/index.html>

<https://www.lesphinx-developpement.fr/>

<https://www.lesphinx-developpement.fr/ressources/didacticiels-et-tutoriels-videos/>

https://inspe-sciedu.gricad-pages.univ-grenoble-alpes.fr/reflexpro/installer_sphinx.html

<https://www.youtube.com/watch?v=FcbXzWKKmQY&t=9s>

https://www.youtube.com/watch?v=lQ_VUZvWTm4

https://youtu.be/sXQ28Q3DUis?si=vvZJURt_iCSqjY2f

<https://sphinxsearch.com/docs/current.html#supported-system>

<https://www.pythian.com/blog/technical-track/using-the-sphinx-search-engine-with-mysql>

<https://www.sqlshack.com/building-full-text-indexes-using-the-sphinx-search-engine/>

<https://sphinxsearch.com/docs/>

<https://www.sphinx-doc.org/en/master/usage/installation.html>

https://inspe-sciedu.gricad-pages.univ-grenoble-alpes.fr/reflexpro/installer_sphinx.html

<https://www.univ-montp3.fr/miap/ens/site/uploads/Main.DocSphynx/Mtravail.pdf>

<https://youtu.be/-ybnxq149hA?si=E4vWMf0eKkc7s9Dc>

<https://www.youtube.com/watch?v=WBGby6DQyBs>

https://www.youtube.com/watch?v=RgBrnHH2Y_o

<https://sphinxsearch.com/docs/current.html#quick-tour>