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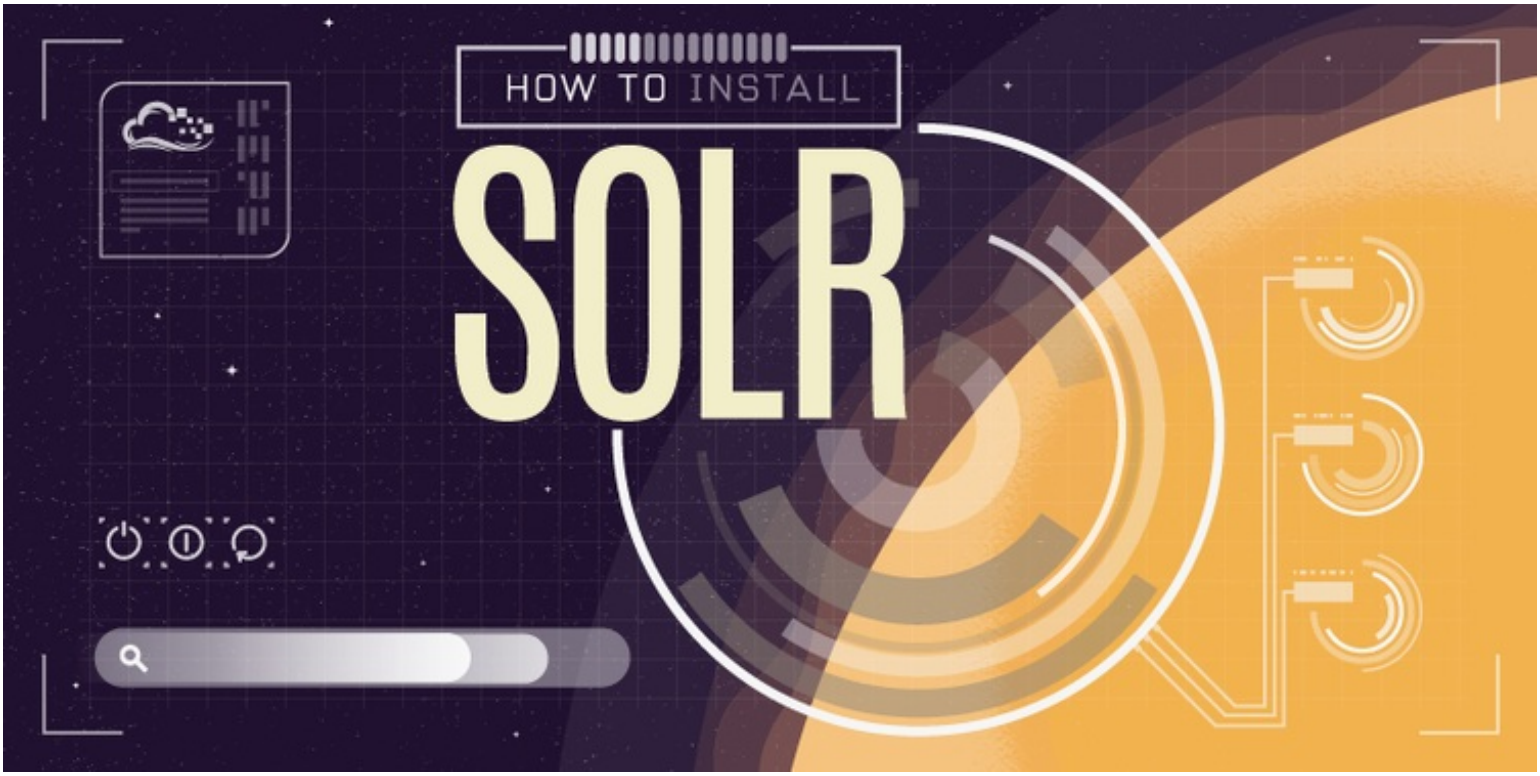


How To Install Solr 5.2.1 on Ubuntu 14.04

Posted Jul 14, 2015 39.7k Java Ubuntu

Written in collaboration with Solr

Introduction

Solr is a search engine platform based on Apache Lucene. It is written in Java and uses the Lucene library to implement indexing. It can be accessed using a variety of REST APIs, including XML and JSON. This is the feature list from their website:

- Advanced Full-Text Search Capabilities
- Optimized for High Volume Web Traffic
- Standards Based Open Interfaces - XML, JSON and HTTP
- Comprehensive HTML Administration Interfaces
- Server statistics exposed over JMX for monitoring
- Linearly scalable, auto index replication, auto failover and recovery
- Near Real-time indexing
- Flexible and Adaptable with XML configuration
- Extensible Plugin Architecture

In this article, we will install Solr using its binary distribution.

Prerequisites

To follow this tutorial, you will need:

- One 1 GB Ubuntu 14.04 Droplet at minimum, but the amount of RAM needed depends highly on your specific situation.
- A sudo non-root user.

Step 1 — Installing Java

Solr requires Java, so in this step, we will install it.

The complete Java installation process is thoroughly described in this article, but we'll use a slightly different process.

First, use apt-get to install `python-software-properties`:

```
$ sudo apt-get install python-software-properties
```

Instead of using the `default-jdk` or `default-jre` packages, we'll install the latest version of Java 8. To do this, add the unofficial Java installer repository:

```
$ sudo add-apt-repository ppa:webupd8team/java
```

You will need to press `ENTER` to accept adding the repository to your index.

Then, update the source list:

```
$ sudo apt-get update
```

Last, install Java 8 using apt-get. You will need to agree to the Oracle Binary Code License Agreement for the Java SE Platform Products and JavaFX.

```
$ sudo apt-get install oracle-java8-installer
```

Step 2 — Installing Solr

In this section, we will install Solr 5.2.1. We will begin by downloading the Solr distribution.

First, find a suitable mirror on this page. Then, copy the link of `solr-5.2.1.tgz` from the mirror. For example, we'll use `http://apache.mirror1.spango.com/lucene/solr/5.2.1/`.

Then, download the file in your home directory:

```
$ cd ~
$ wget http://apache.mirror1.spango.com/lucene/solr/5.2.1/solr-5.2.1.tgz
```

Next, extract the service installation file:

```
$ tar xzf solr-5.2.1.tgz solr-5.2.1/bin/install_solr_service.sh --strip-components=2
```

And install Solr as a service using the script:

```
$ sudo bash ./install_solr_service.sh solr-5.2.1.tgz
```

Finally, check if the server is running:

```
$ sudo service solr status
```

You should see an output that begins with this:

Solr status output

```
Found 1 Solr nodes:

Solr process 2750 running on port 8983

. . .
```

Step 3 — Creating a Collection

In this section, we will create a simple Solr collection.

Solr can have multiple collections, but for this example, we will only use one. To create a new collection, use the following command. We run it as the Solr user in this case to avoid any permissions errors.

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

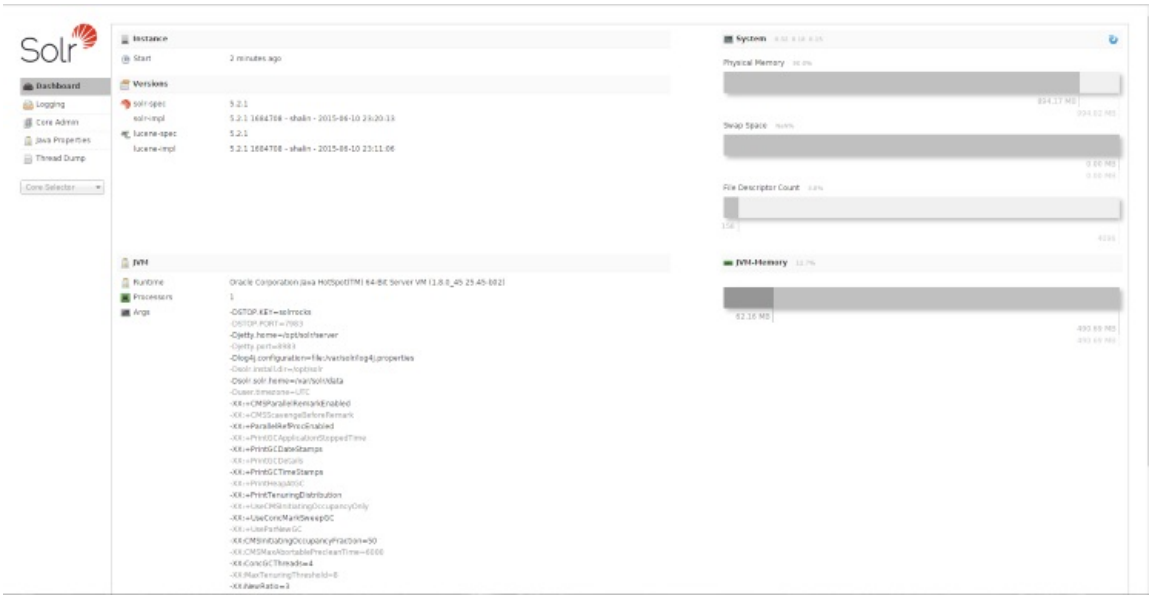
In this command, `gettingstarted` is the name of the collection and `-n` specifies the configset. There are 3 config sets supplied by Solr by default; in this case, we have used one that is schemaless, which means that any field can be supplied, with any name, and the type will be guessed.

You have now added the collection and can start adding data. The default schema has only one required field: `id`. It has no other default fields, only dynamic fields. If you want to have a look at the schema, where everything is explained clearly, have a look at the file `/opt/solr/server/solr/gettingstarted/conf/schema.xml`.

Step 4 — Adding and Querying Documents

In this section, we will explore the Solr web interface and add some documents to our collection.

When you visit `http://your_server_ip:8983/solr` using your web browser, the Solr web interface should appear:



The web interface contains a lot of useful information which can be used to debug any problems you encounter during use.

Collections are divided up into cores, which is why there are a lot of references to cores in the web interface. Right now, the collection `gettingstarted` only contains one core, named `gettingstarted`. At the left-hand side, the **Core Selector** pull down menu is visible,

in which you'll be able to select `gettingstarted` to view more information.

After you've selected the `gettingstarted` core, select **Documents**. Documents store the real data that will be searchable by Solr. Because we have used a schemaless configuration, we can use any field. Let'sl add a single document with the following example *JSON* representation by copying the below into the **Document(s)** field:

```
{
    "number": 1,
    "president": "George Washington",
    "birth_year": 1732,
    "death_year": 1799,
    "took_office": "1789-04-30",
    "left_office": "1797-03-04",
    "party": "No Party"
}
```

Click **Submit document** to add the document to the index. After a few moments, you will see the following:

Output after adding Document

```
Status: success
Response:
{
  "responseHeader": {
    "status": 0,
    "QTime": 509
  }
}
```

You can add more documents, with a similar or a completely different structure, but you can also continue with just one document.

Now, select **Query** on the left to query the document we just added. With the default values in this screen, after clicking on **Execute Query**, you will see 10 documents at most, depending on how many you added:

Query output

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 58,
    "params": {
      "q": "*:*",
      "indent": "true",
      "wt": "json",
      "_": "1436827539345"
    }
  },
  "response": {
    "numFound": 1,
    "start": 0,
    "docs": [
      {
        "number": [
          1
        ],
        "president": [
          "George Washington"
        ],
        "birth_year": [
          1732
```

```
        ],
        "death_year": [
          1799
        ],
        "took_office": [
          "1789-04-30T00:00:00Z"
        ],
        "left_office": [
          "1797-03-04T00:00:00Z"
        ],
        "party": [
          "No Party"
        ],
        "id": "1ce12ed2-add9-4c65-aeb4-a3c6efb1c5d1",
        "_version_": 1506622425947701200
      }
    ]
  }
}
```


Conclusion

There are many more options available, but you have now successfully installed Solr and can start using it for your own site.

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14 Comments

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0

Hero *July 21, 2015*

Thank you, Hazel! But how to restart solr after crash (eg out of memory)?

0

koesie10 *July 21, 2015*

You should be able to restart by executing:

```
$ sudo service solr restart
```

0

Hero *July 21, 2015*

I mean automatic reset after a crash

0

spetrov *September 16, 2015*

Thank you for the guide. How to protect access to Solr?

0

msahu *October 29, 2015*

After complete Step3,
I tried to open http://your*server*ip:8983/solr using my web browser, then Solr web interface is not appearing.

Plz I am waiting for your responses. in which step I have done wrong.

msahu *November 3, 2015*

0

Last issue I found that Soluton. After that I stuck over Core folder's.
Bcoz I used ur command to create Core Folder i.e. sudo su - solr -c "/opt/solr/bin/solr create -c gettingstarted -n data*driven*schema_configs"
And it creates. But I am trying to open from Putty and from that created folder i.e. gettingstarted and followed the Path "/opt/solr/server/solr/gettingstarted", but i am not getting any folder like "gettingstarted".
So plz let me know how to get created folders.

msahu *November 4, 2015*

0

sorry, no dataimport-handler defined!

Plz can u explain me how to resolve above issue.

ansondparker *November 29, 2015*

0

great tutorial - why did you opt to switch java versions? just curious

reggie *December 8, 2015*

0

Having a similar issue to msahu. After install, going to http://[my.ip.add.ress]:8983/solr I see:

SolrCore Initialization Failures
Please check your logs for more information
[links]
No cores available Go and create one...
[links]

What am I doing wrong? "gettingstarted" exists in /var/solr/data...?

Thanks!

gksriram88 *December 14, 2015*

0

Hi,
I have installed the solr, it is running on the port 8983, but it shows this error
new*core: org.apache.solr.common.SolrException:org.apache.solr.common.SolrException: Could not load conf for core new*core: Error loading solr config from /var/solr/data/new_core/conf/solrconfig.xml..
Could u help me to solve this error, Thanks in advance!

Shakti *January 29, 2016*

0

Thank you.

dineshmaths *February 24, 2016*

0

after installation am getting error
root@dindudu:/opt# ls
install*solr*service.sh solr-5.2.1.tgz
root@dindudu:/opt# sudo bash ./install*solr*service.sh solr-5.2.1.tgz
Extracting solr-5.2.1.tgz to /opt
Creating /etc/init.d/solr script ...
System start/stop links for /etc/init.d/solr already exist.
Waiting to see Solr listening on port 8983 [/] Still not seeing Solr listening on 8983 after 30 seconds!
tail: cannot open ‘/var/solr/logs/solr.log’ for reading: No such file or directory

Found 1 Solr nodes:

Solr process 12410 from /var/solr/solr-8983.pid not found.
Service solr installed.
root@dindudu:/opt# sudo service solr status

Found 1 Solr nodes:

Solr process 12410 from /var/solr/solr-8983.pid not found.
root@dindudu:/opt# service solr start
Waiting to see Solr listening on port 8983 [/] Still not seeing Solr listening on 8983 after 30 seconds!
tail: cannot open ‘/var/solr/logs/solr.log’ for reading: No such file or directory
root@dindudu:/opt# /etc/init.d/solr status

Found 1 Solr nodes:

Solr process 12855 from /var/solr/solr-8983.pid not found.
How to fix this error

dineshmaths *February 25, 2016*

0

http://104.131.172.86:8983/solr/

HTTP ERROR 404

Problem accessing /solr/. Reason:

```
Not Found
```

Powered by Jetty://
why am not able to see the solr admin panel?

jasonruyle *February 29, 2016*

0

This worked great, but how do you recommend we secure this thing? Right now anyone can access this area and delete any cores that we may setup.