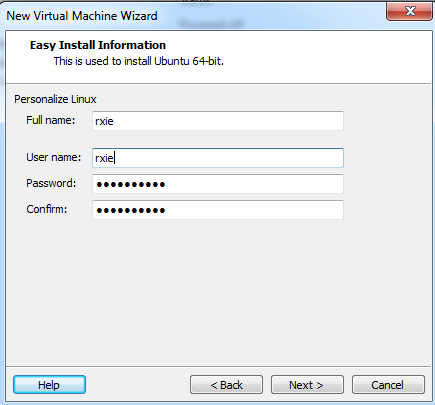
Solr Environment setup in Ubuntu

# Ubuntu on VMWare

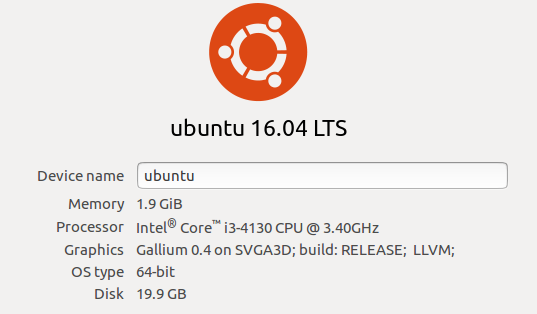


Rxie

X@U

Download Docker for Ubuntu

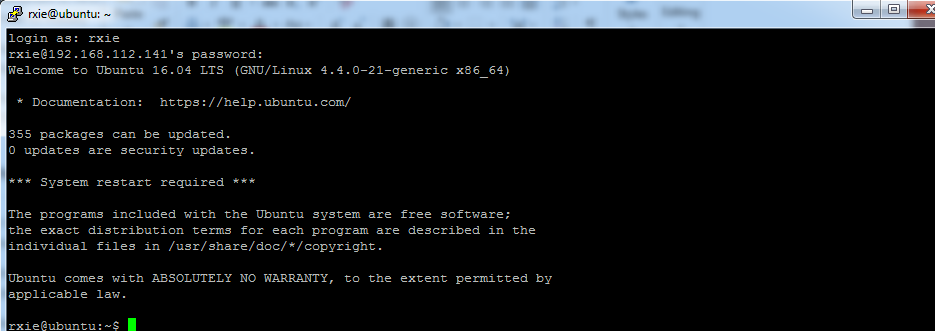
<https://www.docker.com/community-edition>



# Install openssh

sudo apt-get install openssh-server

# Access via putty



# Install Java 1.8 JRE

sudo apt-get install default-jre

# Solr location

Download:

/opt/solr-7.2.1

After Java 1.8 JRE is installed, start solr:

rxie@ubuntu:~/Downloads/solr-7.2.1$ bin/solr start

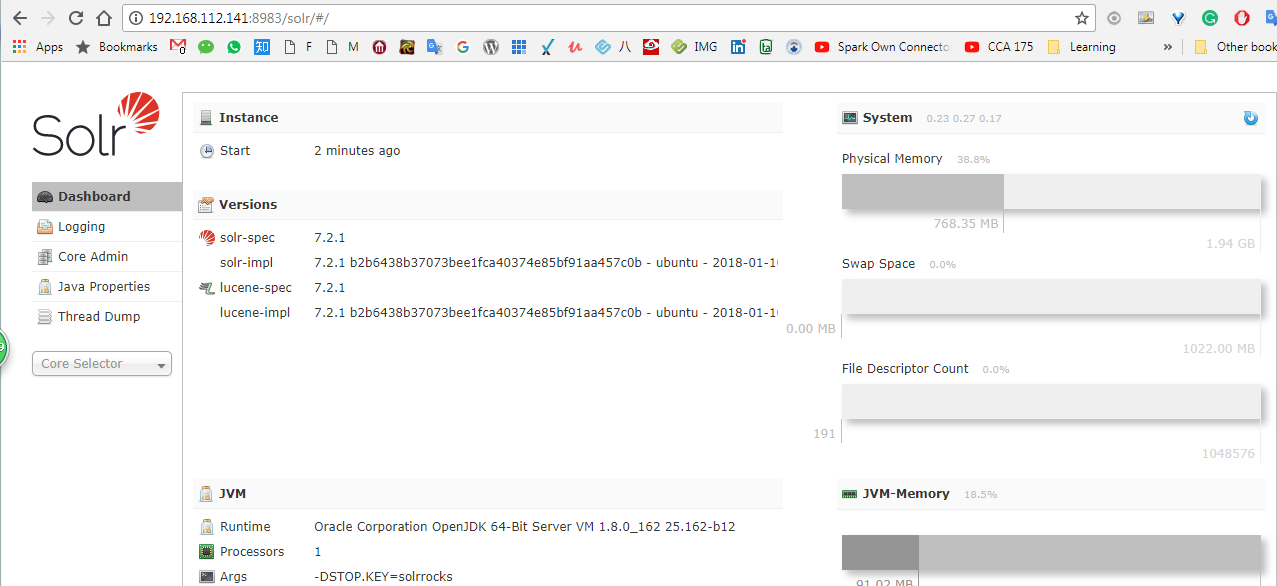


Solr introduction tutorial:

<https://www.youtube.com/watch?v=LhN_y1knuVs>

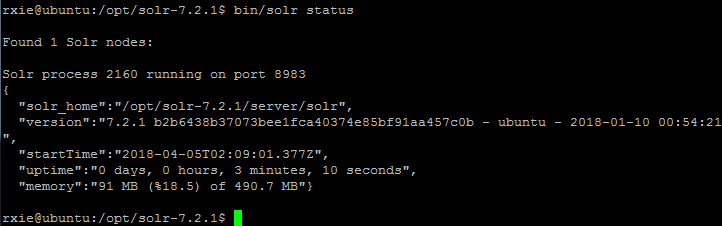
Enter Solr Admin via port 8983

<http://192.168.112.141:8983/solr/#/>



Core: standalone mode

Collection: cluster mode



rxie@ubuntu:/opt/solr-7.2.1$ bin/solr status

Found 1 Solr nodes:

Solr process 2160 running on port 8983

{

"solr\_home":"/opt/solr-7.2.1/server/solr",

"version":"7.2.1 b2b6438b37073bee1fca40374e85bf91aa457c0b - ubuntu - 2018-01-10 00:54:21",

"startTime":"2018-04-05T02:09:01.377Z",

"uptime":"0 days, 0 hours, 3 minutes, 10 seconds",

"memory":"91 MB (%18.5) of 490.7 MB"}

Cleanup: delete all existing cores to start from scratch

/opt/solr-7.2.1/bin/solr delete -c fix\_messages

/opt/solr-7.2.1/bin/solr delete -c fix

/opt/solr-7.2.1/bin/solr delete -c film

Create Core (in command line)

rxie@ubuntu:/opt/solr-7.2.1$ bin/solr create\_core -c fix

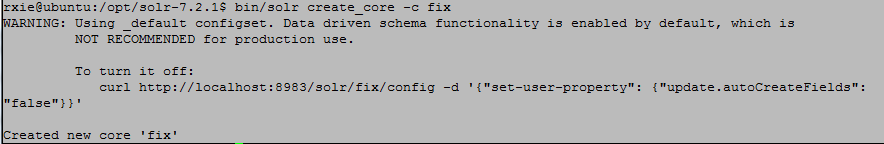
WARNING: Using \_default configset. Data driven schema functionality is enabled by default, which is

NOT RECOMMENDED for production use.

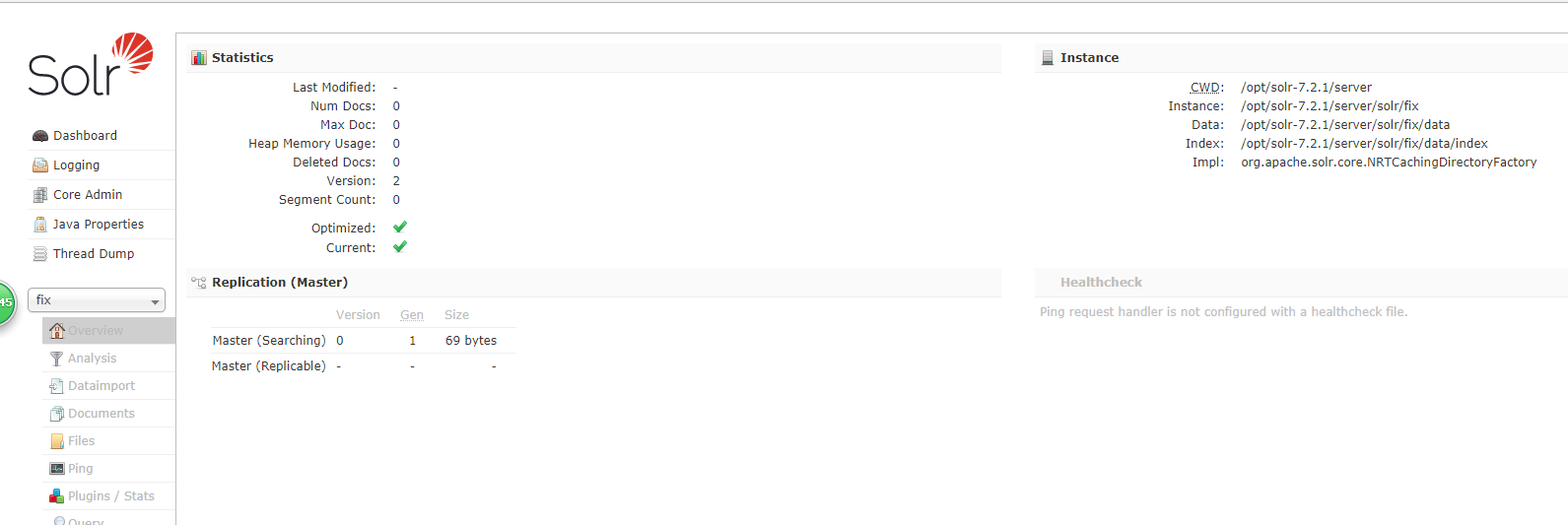
To turn it off:

curl http://localhost:8983/solr/fix /config -d '{"set-user-property": {"update.autoCreateFields":"false"}}'

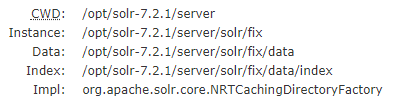
Created new core 'fix'



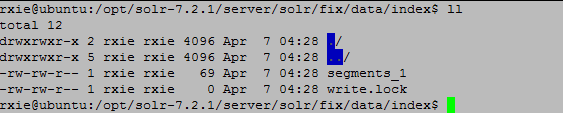
After core is created in command, refresh the Solr Admin page and the core is available there:



Overview:



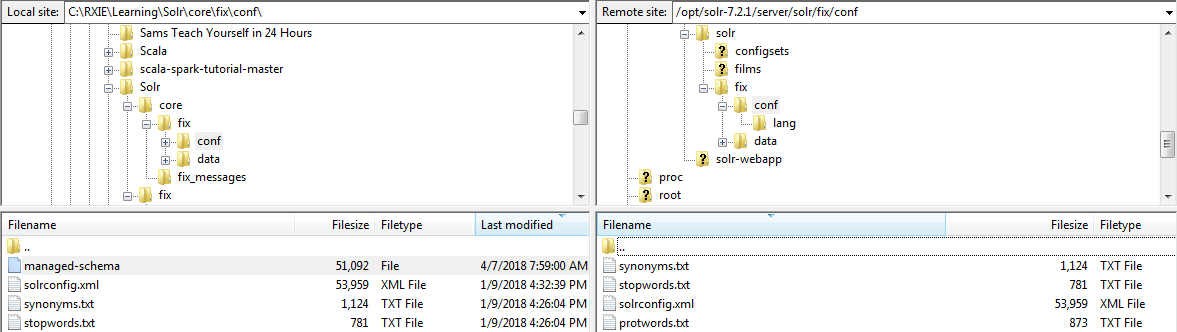
Check the index folder



Create the schema:

path: [rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/conf$](mailto:rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/conf$)

/opt/solr-7.2.1/server/solr/fix/conf



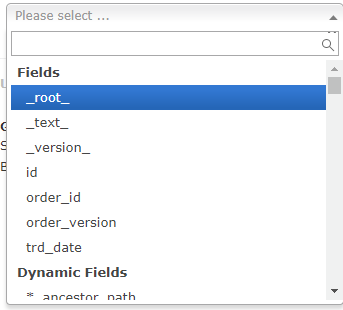
<!--manually added the needed fields to be index'ed on -->

<field name="order\_id" type="text\_general" indexed="true" stored="false" multiValued="true"/>

<field name="order\_version" type="text\_general" indexed="true" stored="false" multiValued="true"/>

<field name="trd\_date" type="text\_general" indexed="true" stored="false" multiValued="true"/>

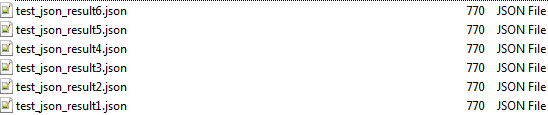
Double check on Solr Admin: Shut down Solr and restart, the three new fields are added:



Prepare the test doc test\_json\_result.json

{"order\_id": "337912000000002", "order\_version": "", "trd\_date": "20180320", "message": "8=FIX.4.49=65335=RIO1=TEST11=33791200000000238=144=2.039=A40=249=VIPER50=JPNIK0154=155=JNI253D8.OS56=XSVC59=075=20180350100=XOSE10039=viperooe10241=viperooe150=A372=D122=20180320-08:08:35.03810066=20180320-08:08:35.03810436=20180320-08:08:35.038202=25375.052=20180320-08:08:35.08860=20180320-08:08:35.08810071=20180320-08:08:35.08811210=33791200000000237=33791200000000210184=337912000000002201=129=410438=RIO.4.510005=17810515=17810518=178581=13660=1021133=G528=P10104=Y10202=APMKTMAKING10208=APAC.VIPER.OOE10217=Y10292=11511032=-1382=010537=XOSE15=JPY167=OPT48=179492540455=17949254022=101456=101151=1.0421=JPN10=200

"}



rxie@ubuntu:/opt/solr-7.2.1$ bin/post -c fix /home/data/current/test\_json\_result1.json

java -classpath /opt/solr-7.2.1/dist/solr-core-7.2.1.jar -Dauto=yes -Dc=fix -Ddata=files org.apache.solr.util.SimplePostTool /home/data/current/test\_json\_result1.json

SimplePostTool version 5.0.0

Posting files to [base] url http://localhost:8983/solr/fix/update...

Entering auto mode. File endings considered are xml,json,jsonl,csv,pdf,doc,docx,ppt,pptx,xls,xlsx,odt,odp,ods,ott,otp,ots,rtf,htm,html,txt,log

POSTing file test\_json\_result1.json (application/json) to [base]/json/docs

1 files indexed.

COMMITting Solr index changes to http://localhost:8983/solr/fix/update...

Time spent: 0:00:01.673

rxie@ubuntu:/opt/solr-7.2.1$

Check index folder

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ pwd

/opt/solr-7.2.1/server/solr/fix/data/index

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 60

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:03 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

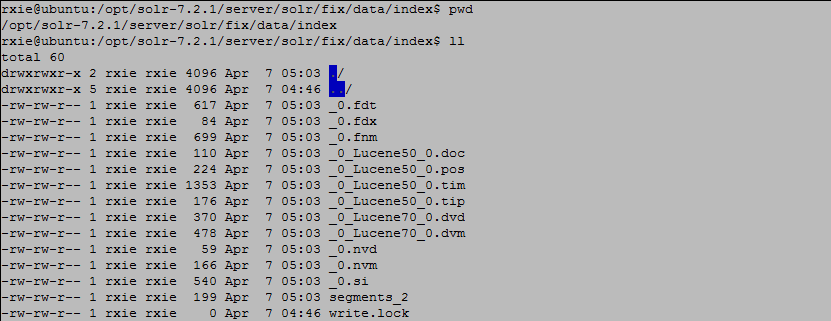
-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 199 Apr 7 05:03 segments\_2

-rw-rw-r-- 1 rxie rxie 0 Apr 7 04:46 write.lock



Add the second test doc

bin/post -c fix /home/data/current/test\_json\_result2.json

Check the index folder

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 108

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:06 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:06 \_1.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:06 \_1.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:06 \_1.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:06 \_1\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:06 \_1\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:06 \_1\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:06 \_1\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:06 \_1\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:06 \_1\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:06 \_1.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:06 \_1.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:06 \_1.si

-rw-rw-r-- 1 rxie rxie 260 Apr 7 05:06 segments\_3

-rw-rw-r-- 1 rxie rxie 0 Apr 7 04:46 write.lock

Post third test doc and check the index size

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 156

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:11 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:06 \_1.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:06 \_1.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:06 \_1.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:06 \_1\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:06 \_1\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:06 \_1\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:06 \_1\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:06 \_1\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:06 \_1\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:06 \_1.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:06 \_1.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:06 \_1.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:11 \_2.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:11 \_2.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:11 \_2.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:11 \_2\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:11 \_2\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:11 \_2\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:11 \_2\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:11 \_2\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:11 \_2\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:11 \_2.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:11 \_2.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:11 \_2.si

-rw-rw-r-- 1 rxie rxie 321 Apr 7 05:11 segments\_4

-rw-rw-r-- 1 rxie rxie 0 Apr 7 04:46 write.lock

Add 4th and get the stats as below:

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 204

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:13 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:06 \_1.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:06 \_1.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:06 \_1.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:06 \_1\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:06 \_1\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:06 \_1\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:06 \_1\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:06 \_1\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:06 \_1\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:06 \_1.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:06 \_1.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:06 \_1.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:11 \_2.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:11 \_2.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:11 \_2.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:11 \_2\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:11 \_2\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:11 \_2\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:11 \_2\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:11 \_2\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:11 \_2\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:11 \_2.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:11 \_2.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:11 \_2.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:13 \_3.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:13 \_3.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:13 \_3.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:13 \_3\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:13 \_3\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:13 \_3\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:13 \_3\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:13 \_3\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:13 \_3\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:13 \_3.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:13 \_3.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:13 \_3.si

-rw-rw-r-- 1 rxie rxie 382 Apr 7 05:13 segments\_5

Add 5th and get the stats as below:

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 252

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:16 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:06 \_1.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:06 \_1.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:06 \_1.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:06 \_1\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:06 \_1\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:06 \_1\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:06 \_1\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:06 \_1\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:06 \_1\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:06 \_1.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:06 \_1.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:06 \_1.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:11 \_2.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:11 \_2.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:11 \_2.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:11 \_2\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:11 \_2\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:11 \_2\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:11 \_2\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:11 \_2\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:11 \_2\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:11 \_2.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:11 \_2.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:11 \_2.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:13 \_3.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:13 \_3.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:13 \_3.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:13 \_3\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:13 \_3\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:13 \_3\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:13 \_3\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:13 \_3\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:13 \_3\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:13 \_3.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:13 \_3.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:13 \_3.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:16 \_4.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:16 \_4.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:16 \_4.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:16 \_4\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:16 \_4\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:16 \_4\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:16 \_4\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:16 \_4\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:16 \_4\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:16 \_4.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:16 \_4.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:16 \_4.si

-rw-rw-r-- 1 rxie rxie 443 Apr 7 05:16 segments\_6

-rw-rw-r-- 1 rxie rxie 0 Apr 7 04:46 write.lock

6th doc added

rxie@ubuntu:/opt/solr-7.2.1/server/solr/fix/data/index$ ll

total 300

drwxrwxr-x 2 rxie rxie 4096 Apr 7 05:22 ./

drwxrwxr-x 5 rxie rxie 4096 Apr 7 04:46 ../

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:03 \_0.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:03 \_0.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:03 \_0.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:03 \_0\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:03 \_0\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:03 \_0\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:03 \_0\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:03 \_0\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:03 \_0\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:03 \_0.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:03 \_0.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:03 \_0.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:06 \_1.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:06 \_1.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:06 \_1.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:06 \_1\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:06 \_1\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:06 \_1\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:06 \_1\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:06 \_1\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:06 \_1\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:06 \_1.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:06 \_1.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:06 \_1.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:11 \_2.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:11 \_2.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:11 \_2.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:11 \_2\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:11 \_2\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:11 \_2\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:11 \_2\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:11 \_2\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:11 \_2\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:11 \_2.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:11 \_2.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:11 \_2.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:13 \_3.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:13 \_3.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:13 \_3.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:13 \_3\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:13 \_3\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:13 \_3\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:13 \_3\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:13 \_3\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:13 \_3\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:13 \_3.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:13 \_3.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:13 \_3.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:16 \_4.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:16 \_4.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:16 \_4.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:16 \_4\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:16 \_4\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:16 \_4\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:16 \_4\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:16 \_4\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:16 \_4\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:16 \_4.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:16 \_4.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:16 \_4.si

-rw-rw-r-- 1 rxie rxie 617 Apr 7 05:22 \_5.fdt

-rw-rw-r-- 1 rxie rxie 84 Apr 7 05:22 \_5.fdx

-rw-rw-r-- 1 rxie rxie 699 Apr 7 05:22 \_5.fnm

-rw-rw-r-- 1 rxie rxie 110 Apr 7 05:22 \_5\_Lucene50\_0.doc

-rw-rw-r-- 1 rxie rxie 224 Apr 7 05:22 \_5\_Lucene50\_0.pos

-rw-rw-r-- 1 rxie rxie 1353 Apr 7 05:22 \_5\_Lucene50\_0.tim

-rw-rw-r-- 1 rxie rxie 176 Apr 7 05:22 \_5\_Lucene50\_0.tip

-rw-rw-r-- 1 rxie rxie 370 Apr 7 05:22 \_5\_Lucene70\_0.dvd

-rw-rw-r-- 1 rxie rxie 478 Apr 7 05:22 \_5\_Lucene70\_0.dvm

-rw-rw-r-- 1 rxie rxie 59 Apr 7 05:22 \_5.nvd

-rw-rw-r-- 1 rxie rxie 166 Apr 7 05:22 \_5.nvm

-rw-rw-r-- 1 rxie rxie 540 Apr 7 05:22 \_5.si

-rw-rw-r-- 1 rxie rxie 504 Apr 7 05:22 segments\_7

-rw-rw-r-- 1 rxie rxie 0 Apr 7 04:46 write.lock

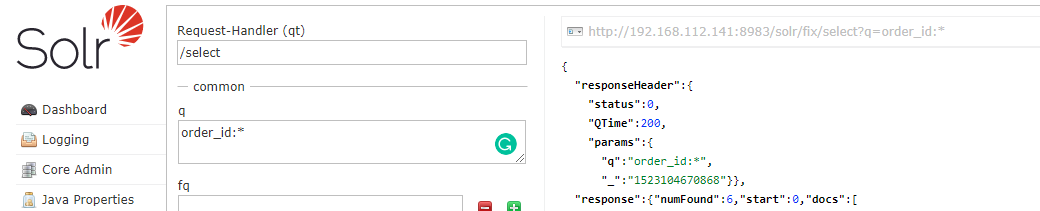
Estimate index growth trend (bytes):

|  |  |  |
| --- | --- | --- |
| 1 | 5075 | 5K |
| 2 | 10012 | 10K |
| 3 | 14949 | 15K |
| 4 | 19886 | 20K |
| 5 | 24823 | 25K |
| 6 | 29760 | 30K |

For 1 million doc to be index’ed, the index size is likely around 5M

Check the search result

After 6 doc were added to the index, Solr Admin shows 6 doc founds when no specific order\_id is queried on:



Use any order\_id for testing: 337912000000003



POST URL:

<http://192.168.112.141:8983/solr/fix/select?q=order_id:337912000000003>

GET Response:

{

"responseHeader":{

"status":0,

"QTime":3,

"params":{

"q":"order\_id:337912000000003"}},

"response":{"numFound":1,"start":0,"docs":[

{

"message":["8=FIX.4.4\u00019=653\u000135=RIO\u00011=TEST\u000111=337912000000002\u000138=1\u000144=2.0\u000139=A\u000140=2\u000149=VIPER\u000150=JPNIK01\u000154=1\u000155=JNI253D8.OS\u000156=XSVC\u000159=0\u000175=20180350\u0001100=XOSE\u000110039=viperooe\u000110241=viperooe\u0001150=A\u0001372=D\u0001122=20180320-08:08:35.038\u000110066=20180320-08:08:35.038\u000110436=20180320-08:08:35.038\u0001202=25375.0\u000152=20180320-08:08:35.088\u000160=20180320-08:08:35.088\u000110071=20180320-08:08:35.088\u000111210=337912000000002\u000137=337912000000002\u000110184=337912000000002\u0001201=1\u000129=4\u000110438=RIO.4.5\u000110005=178\u000110515=178\u000110518=178\u0001581=13\u0001660=102\u00011133=G\u0001528=P\u000110104=Y\u000110202=APMKTMAKING\u000110208=APAC.VIPER.OOE\u000110217=Y\u000110292=115\u000111032=-1\u0001382=0\u000110537=XOSE\u000115=JPY\u0001167=OPT\u000148=179492540\u0001455=179492540\u000122=101\u0001456=101\u0001151=1.0\u0001421=JPN\u000110=200\u0001\u0002\r\n"],

"id":"3aa236f3-8d26-4a5d-b040-1bf778dd584f",

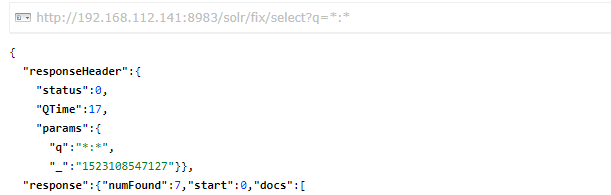
"message\_str":["8=FIX.4.4\u00019=653\u000135=RIO\u00011=TEST\u000111=337912000000002\u000138=1\u000144=2.0\u000139=A\u000140=2\u000149=VIPER\u000150=JPNIK01\u000154=1\u000155=JNI253D8.OS\u000156=XSVC\u000159=0\u000175=20180350\u0001100=XOSE\u000110039=viperooe\u000110241=viperooe\u0001150=A\u0001372=D\u0001122=20180320-08:08:35.038\u000110066=20180320-08:08:35.038\u000110436=20180320-"],

"\_version\_":1597089328971907072}]

}}

To create index for the whole directory:

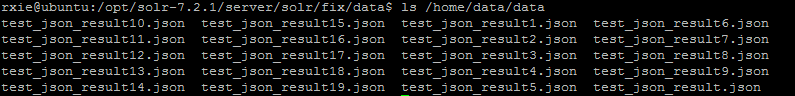
Before:7 documents

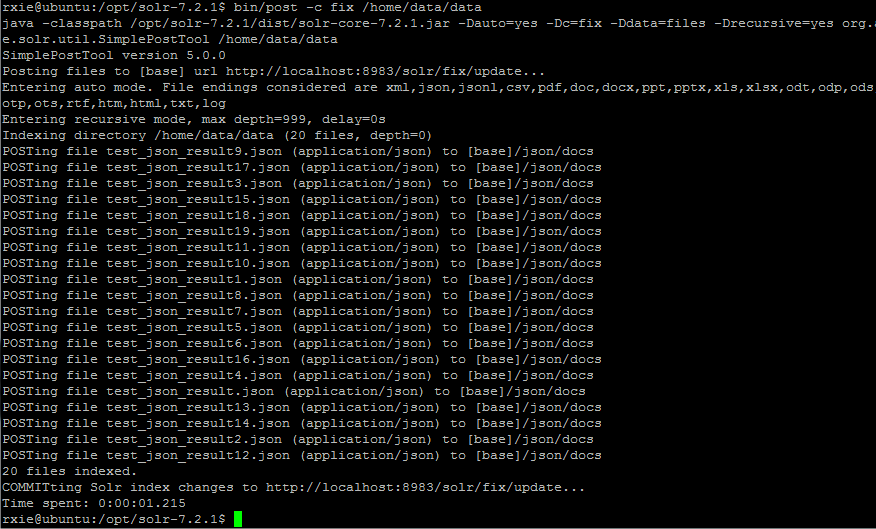


Directory of files: ./post -c myfiles ~/Documents

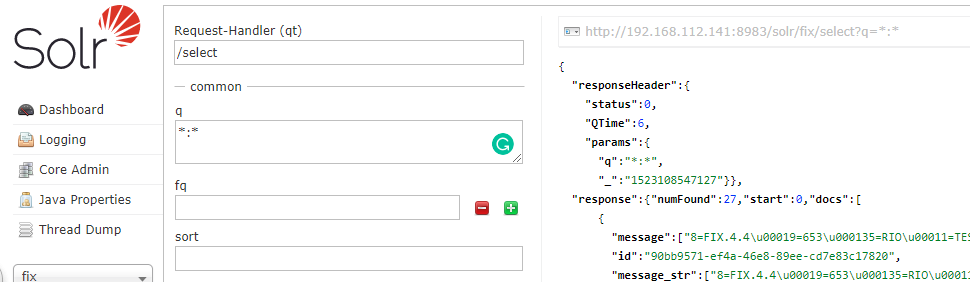
bin/post -c fix /home/data/data

/home/data/data: 20 documents





Check the Solr Admin, now there are 27 documents indexed:

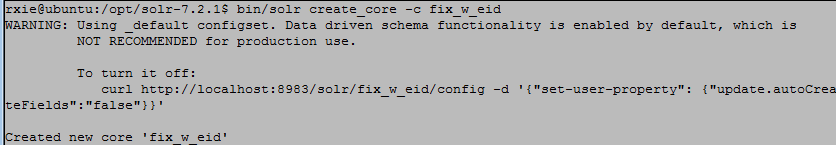


Search a newly added one: 337912000000019



Create a new core fix\_w\_eid

bin/solr create\_core -c fix\_w\_eid



Create new schema *managed-schema*

/opt/solr-7.2.1/server/solr/fix\_w\_eid/conf

As per the FIX 4.4 protocol explanation:

<http://btobits.com/fixopaedia/fixdic44/fields_by_tag_.html>

uid\_message: Tag 37 + 122

|  |  |
| --- | --- |
| [(37) OrderID](http://btobits.com/fixopaedia/fixdic44/tag_37_OrderID_.html) | Unique identifier for Order as assigned by sell-side (broker, exchange, ECN). Uniqueness must be guaranteed within a single trading day. Firms which accept multi-day orders should consider embedding a date within the [OrderID (37)](http://btobits.com/fixopaedia/fixdic44/tag_37_OrderID_.html) field to assure uniqueness across days. |
| [(122) OrigSendingTime](http://btobits.com/fixopaedia/fixdic44/tag_122_OrigSendingTime_.html) | Original time of message transmission (always expressed in UTC (Universal Time Coordinated, also known as "GMT") when transmitting orders as the result of a resend request. |

uid\_ent: a uid\_ent is generated for each record in the entitlement database as per below:

table: uid\_ent

column:

id: int

uid\_ent:

{"region": "apac", "flow": "apeq", "uid\_message": "337912000000002-20180320-08:08:35.038", "uid\_ent": "aa0058ed-bcca-4ead-a22f-b648ccb66787", "message": "8=FIX.4.49=65335=RIO1=TEST11=33791200000000238=144=2.039=A40=249=VIPER50=JPNIK0154=155=JNI253D8.OS56=XSVC59=075=20180350100=XOSE10039=viperooe10241=viperooe150=A372=D122=20180320-08:08:35.03810066=20180320-08:08:35.03810436=20180320-08:08:35.038202=25375.052=20180320-08:08:35.08860=20180320-08:08:35.08810071=20180320-08:08:35.08811210=33791200000000237=33791200000000210184=337912000000002201=129=410438=RIO.4.510005=17810515=17810518=178581=13660=1021133=G528=P10104=Y10202=APMKTMAKING10208=APAC.VIPER.OOE10217=Y10292=11511032=-1382=010537=XOSE15=JPY167=OPT48=179492540455=17949254022=101456=101151=1.0421=JPN10=200"}

Create new schema *managed-schema*

/opt/solr-7.2.1/server/solr/fix\_w\_eid/conf

<!--created manually -->

<field name="region" type="text\_general" indexed="true" stored="false" multiValued="true"/>

<field name="flow" type="text\_general" indexed="true" stored="false" multiValued="true"/>

<field name="uid\_message" type="text\_general" indexed="true" stored="false" multiValued="true"/>

<field name="uid\_ent" type="text\_general" indexed="true" stored="false" multiValued="true"/>

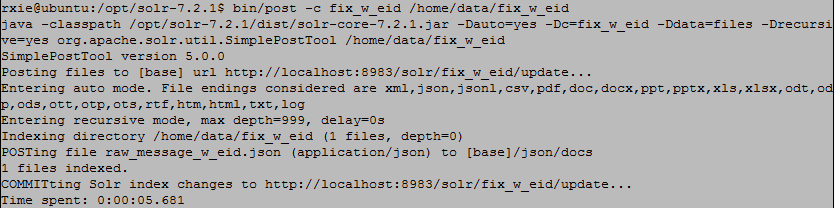
<field name="message" type="text\_general" indexed="true" stored="false" multiValued="true"/>

Add document (C:\RXIE\Learning\Data\FIX\apac\apeq\odac\2018\03\20180328\json)

Server location: /home/data/fix\_w\_eid

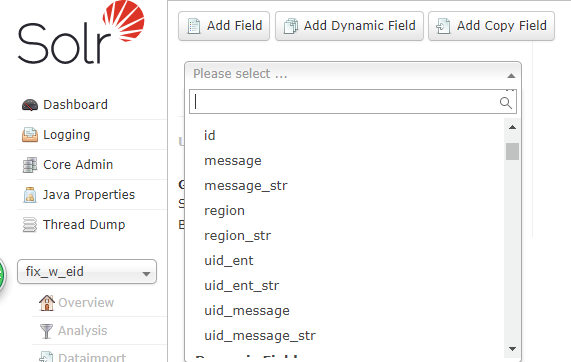
Add it to the core fix\_w\_eid

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid

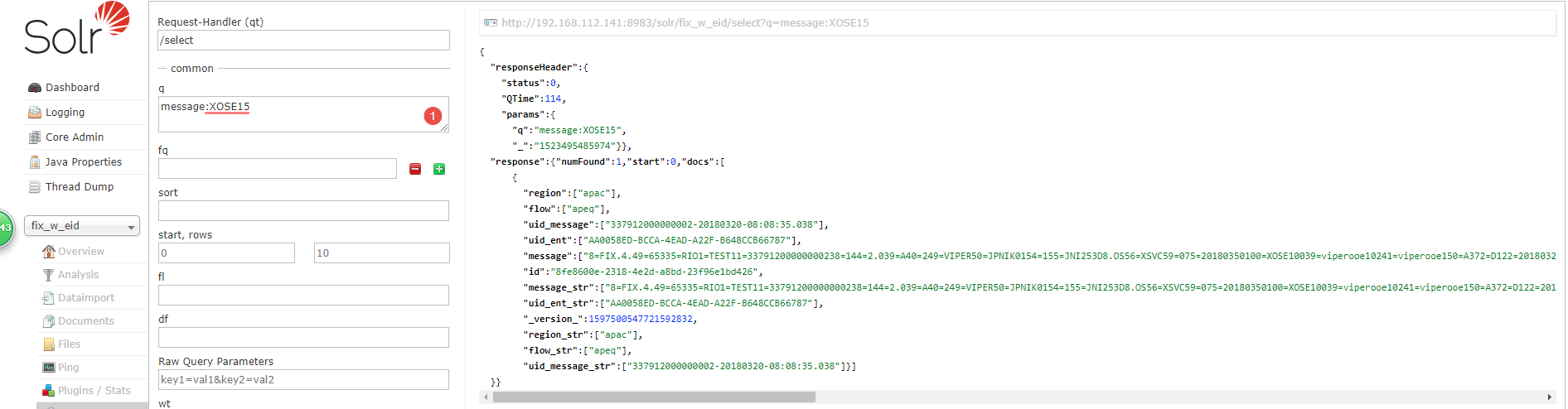


Check in Solr Admin

Schema



Query



Add a whole folder data for indexing

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid/multiple\_messages

Indexing directory /home/data/fix\_w\_eid/multiple\_messages (20 files, depth=0)

POSTing file raw\_message\_w\_eid 16.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 18.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 3.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 12.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 4.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 7.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 1.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 2.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 11.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 20.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 14.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 5.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 13.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 15.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 10.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 8.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 19.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 6.json (application/json) to [base]/json/docs

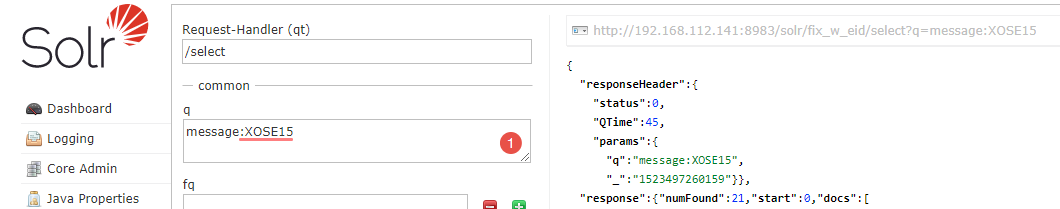
POSTing file raw\_message\_w\_eid 9.json (application/json) to [base]/json/docs

POSTing file raw\_message\_w\_eid 17.json (application/json) to [base]/json/docs

20 files indexed.

COMMITting Solr index changes to http://localhost:8983/solr/fix\_w\_eid/update...

Time spent: 0:00:01.371



Index time: 1.371 seconds

Index size: 19581 Bytes (19K)

Do another test on 960 documents

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid/multiple\_messages\_960

Index time: 29.931 seconds

Index size: 235,054 Bytes (235K)

Do another test on 1920 documents

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid/multiple\_messages\_1920

Index time: 45.686 seconds

Index size: 640,397 Bytes (235K)

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid/multiple\_messages\_3840

Index time: 45.686 seconds

Index size: 640,397 Bytes (235K)

bin/post -c fix\_w\_eid /home/data/fix\_w\_eid/multiple\_messages\_7680

Index time: 29.931 seconds

Index size: 235,054 Bytes (235K)

Performance in a glance

Install fix2json

1. Install ngm:

sudo apt install npm

1. Install fix2json

sudo npm install -g fix2json



Install openssh

sudo apt-get install openssh-server

Connect with FileZilla

