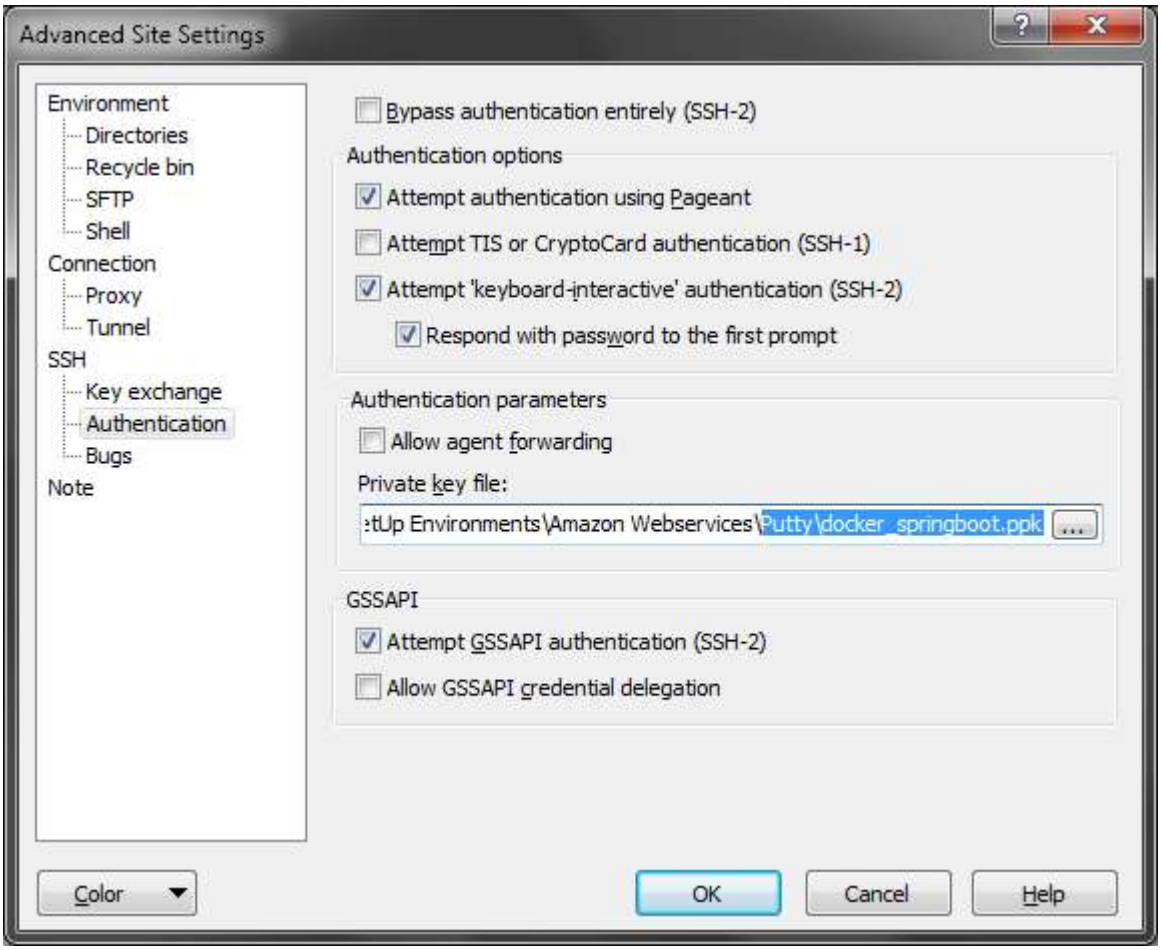
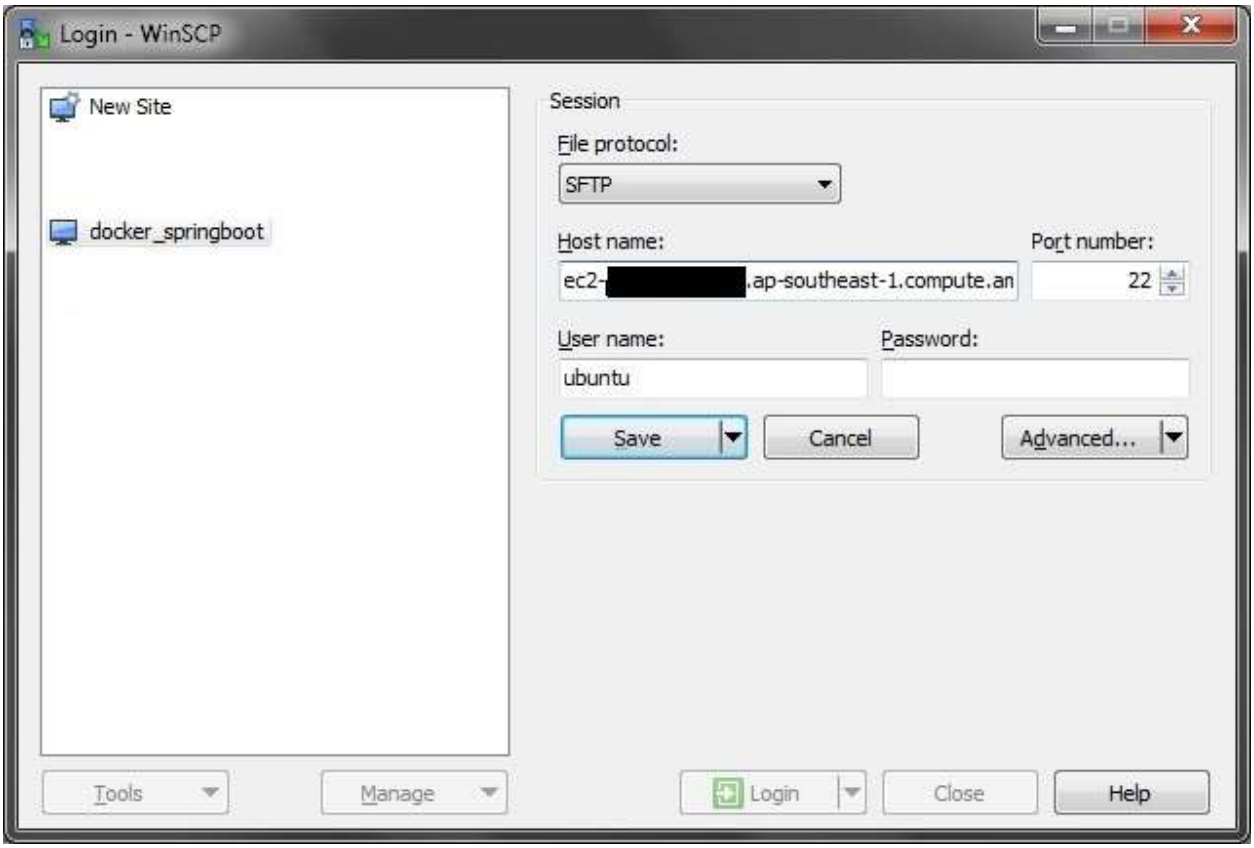
Docker on AWS

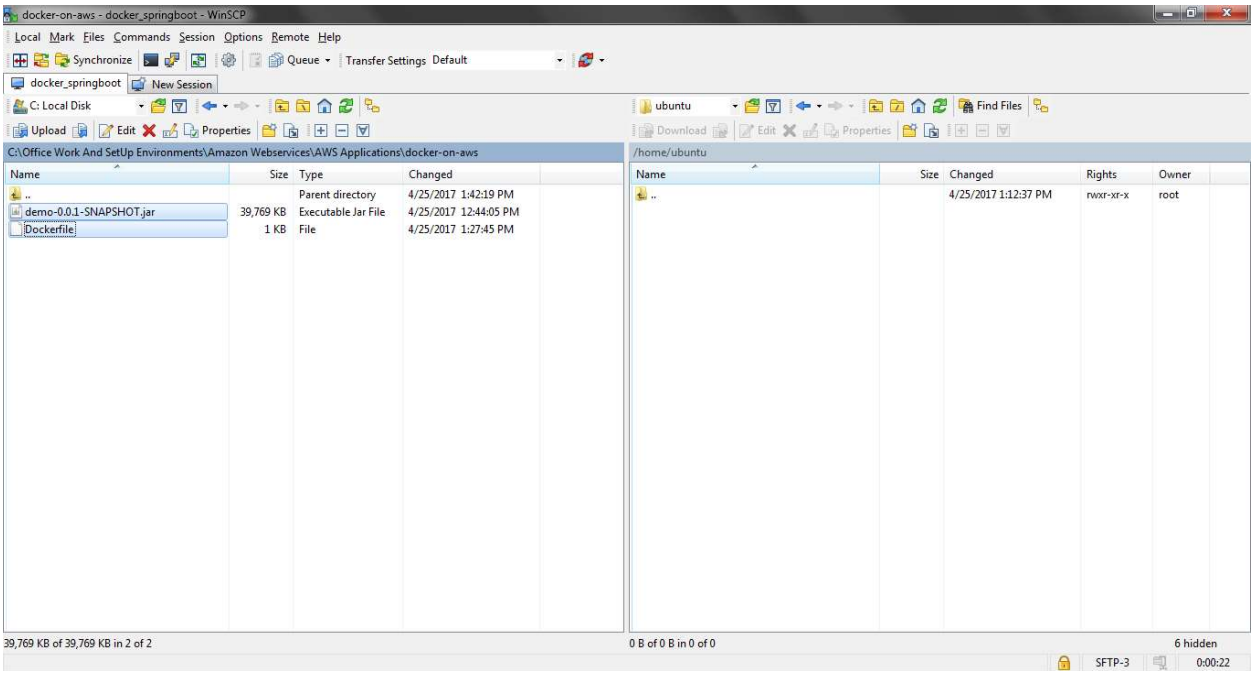
Create a EC2 instance and connect to it via putty, install docker

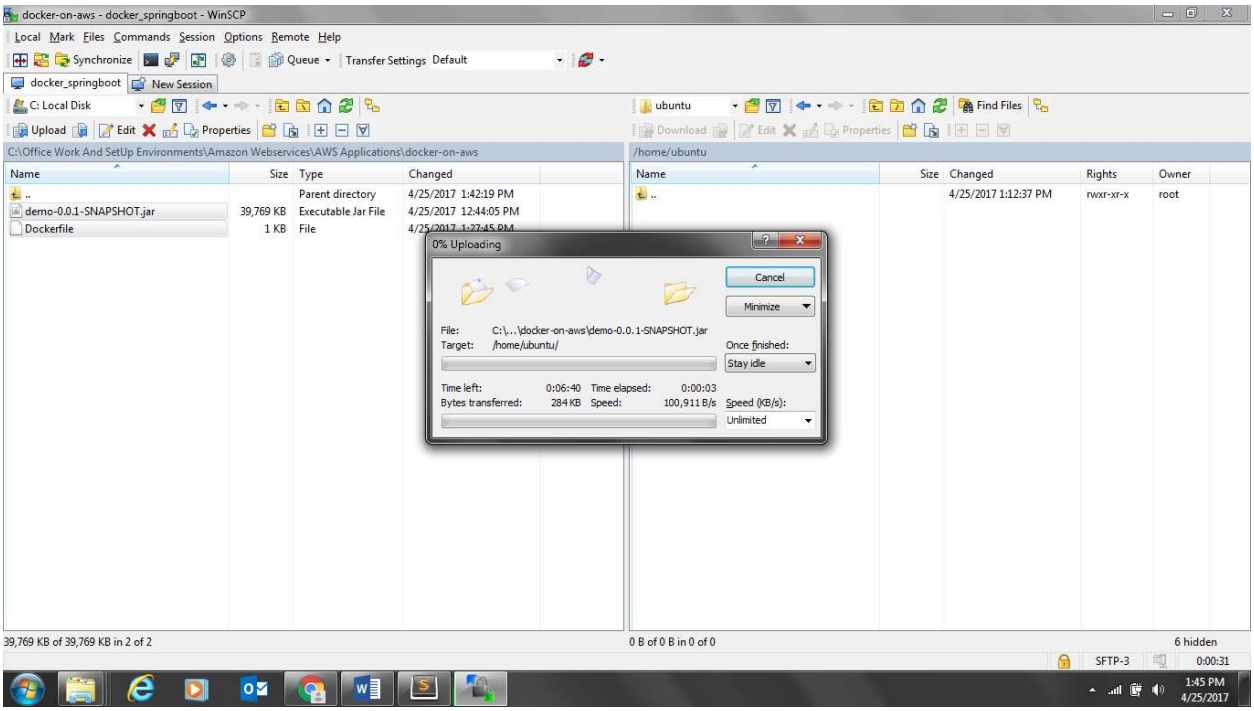
sudo apt-get -y install docker.io

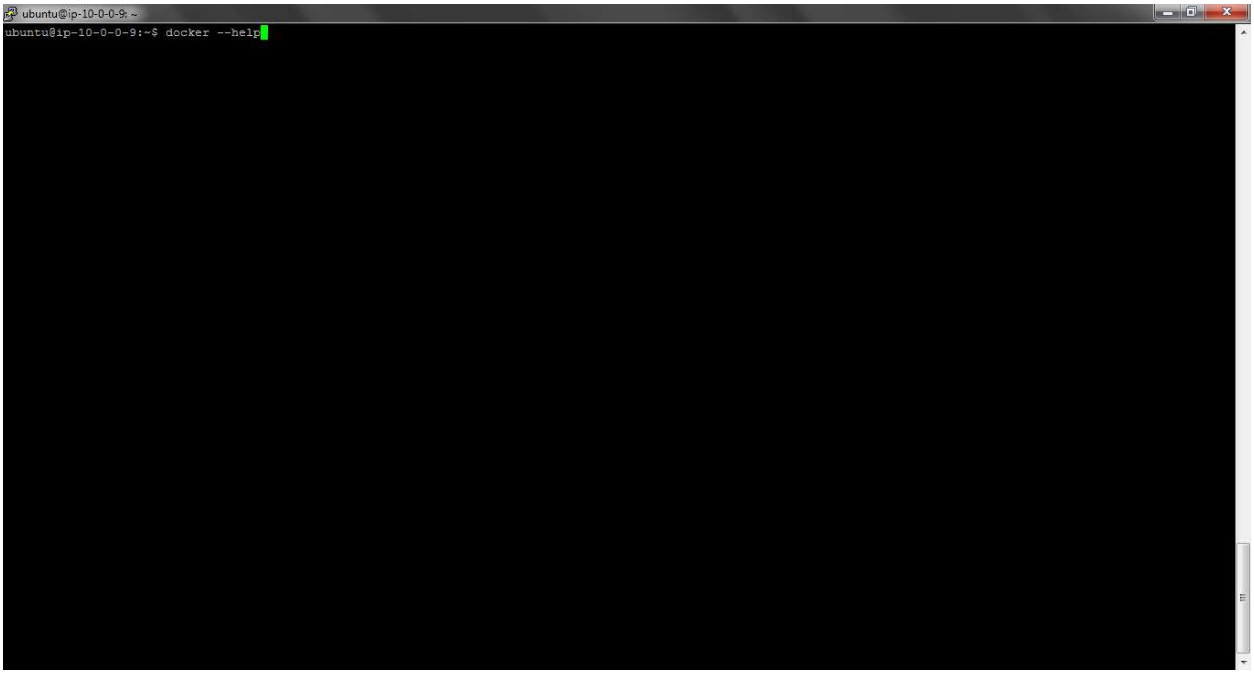
move Dockerfile and jar file to ec2 instance, build and run docker file

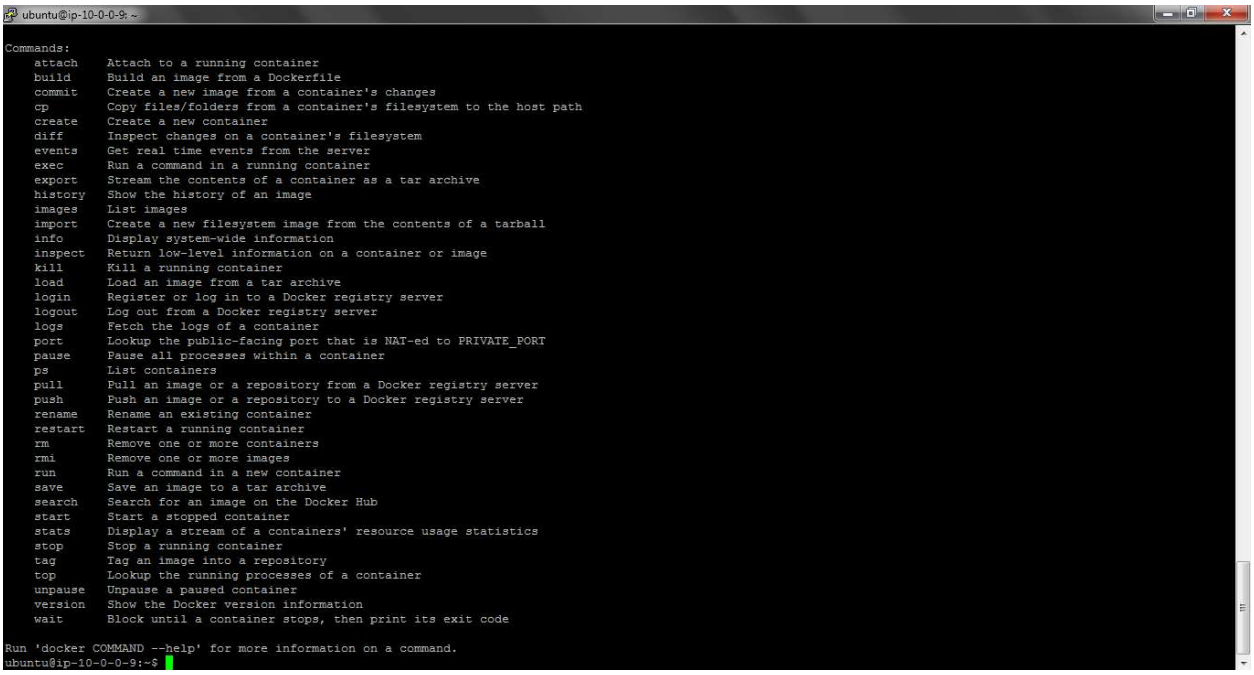


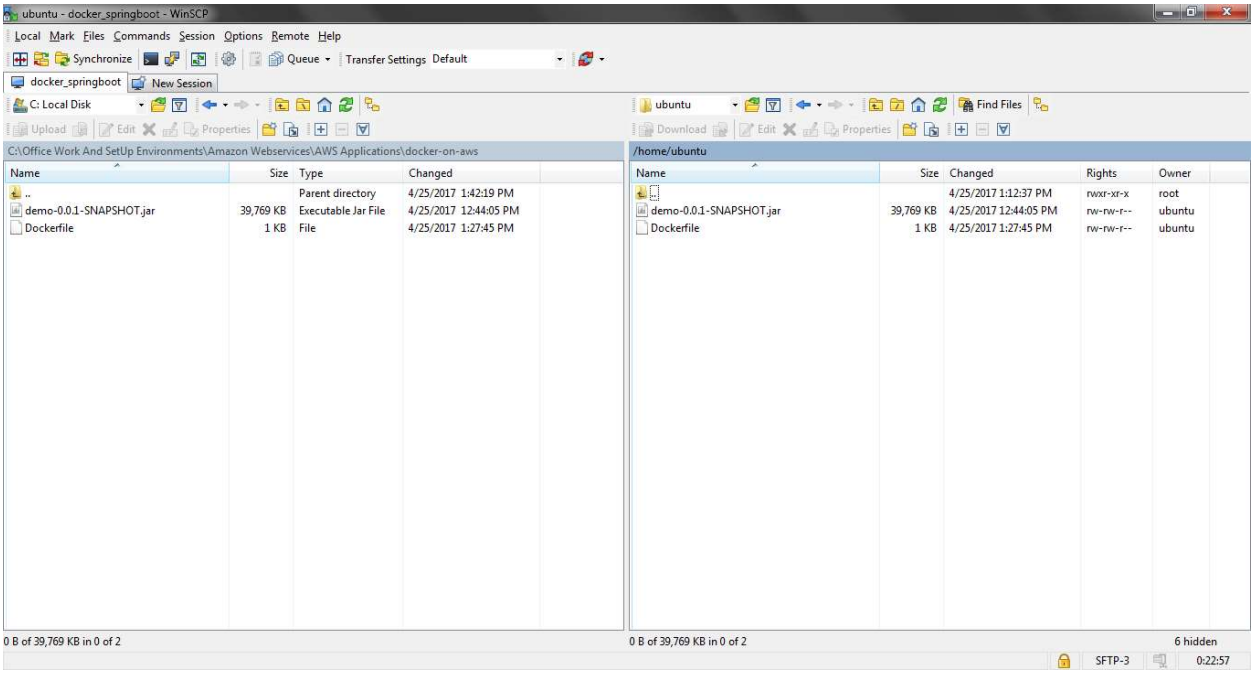

Login - WinSCP
New Site
docker_springboot
Session
File protocol:
SFTP
Host name:
Port number:
ec2-[redacted].ap-southeast-1.compute.an
22
User name:
Password:
ubuntu
Save
Cancel
Advanced...
Tools
Manage
Login
Close
Help

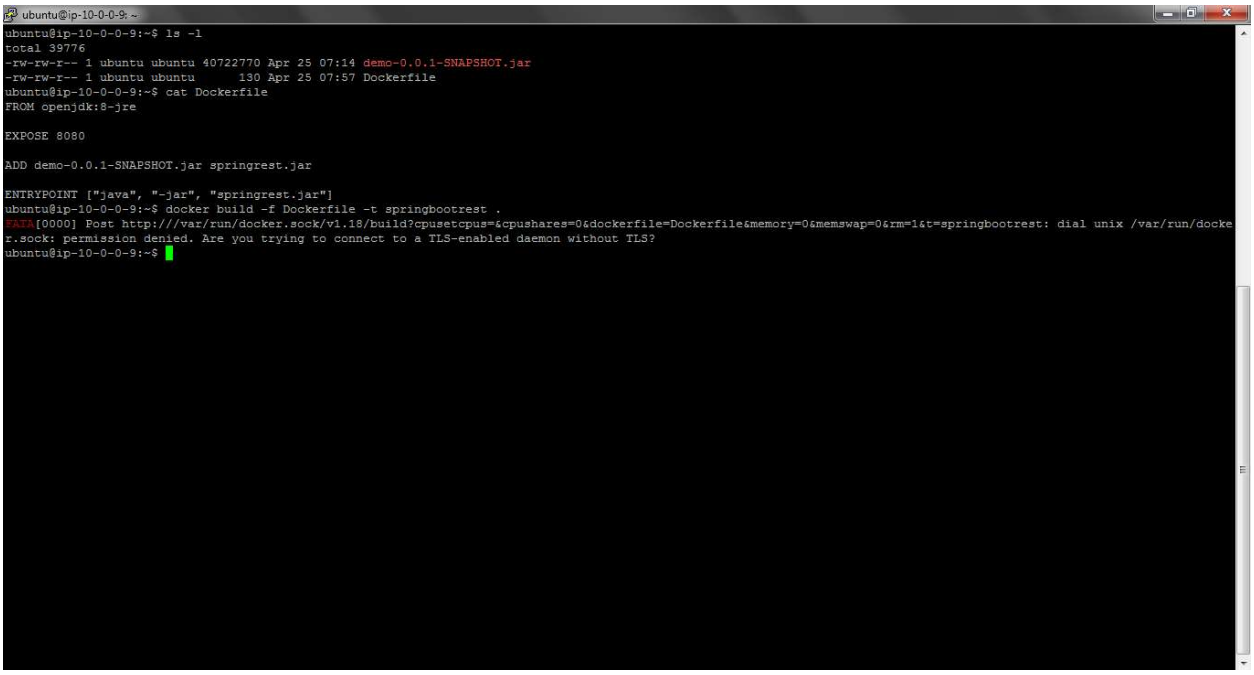

docker-on-aws - docker_springboot - WinSCP
Local Mark Files Commands Session Options Remote Help
Synchronize
Queue
Transfer Settings Default
docker_springboot
New Session
C: Local Disk
Upload
Edit
Properties
C:\Office Work And SetUp Environments\Amazon Webservices\AWS Applications\docker-on-aws
Name
Size
Type
Changed
..
Parent directory
4/25/2017 1:42:19 PM
demo-0.0.1-SNAPSHOT.jar
39,769 KB
Executable Jar File
4/25/2017 12:44:05 PM
Dockerfile
1 KB
File
4/25/2017 1:27:45 PM
ubuntu
Download
Find Files
/home/ubuntu
Rights
Owner
4/25/2017 1:12:37 PM
rwxr-xr-x
root
39,769 KB of 39,769 KB in 2 of 2
0 B of 0 B in 0 of 0
6 hidden
SFTP-3
0:00:22

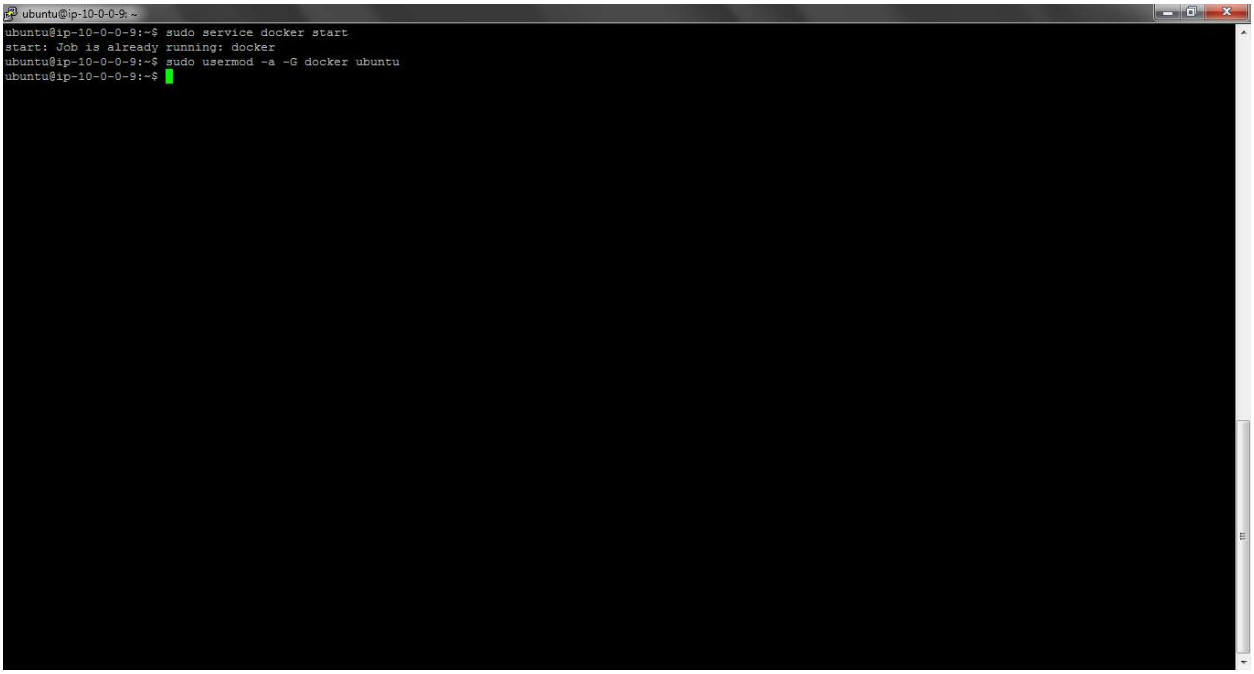

docker-on-aws - docker_springboot - WinSCP
Local Mark Files Commands Session Options Remote Help
Synchronize Queue Transfer Settings Default
docker_springboot New Session
C: Local Disk
Upload Edit Properties
C:\Office Work And SetUp Environments\Amazon Webservices\AWS Applications\docker-on-aws
Name Size Type Changed
.. Parent directory 4/25/2017 1:42:19 PM
demo-0.0.1-SNAPSHOT.jar 39,769 KB Executable Jar File 4/25/2017 12:44:05 PM
Dockerfile 1 KB File
ubuntu
Download Edit Properties
Find Files
/home/ubuntu
Name Size Changed Rights Owner
.. 4/25/2017 1:12:37 PM rwxr-xr-x root
0% Uploading
Cancel
Minimize
File: C:\...\docker-on-aws\demo-0.0.1-SNAPSHOT.jar
Target: /home/ubuntu/
Once finished:
Stay idle
Time left: 0:06:40 Time elapsed: 0:00:03
Bytes transferred: 284 KB Speed: 100,911 B/s
Speed (KB/s):
Unlimited
39,769 KB of 39,769 KB in 2 of 2
0 B of 0 B in 0 of 0
6 hidden
SFTP-3
0:00:31
1:45 PM
4/25/2017


ubuntu@ip-10-0-0-9: ~
ubuntu@ip-10-0-0-9:~$ docker --help

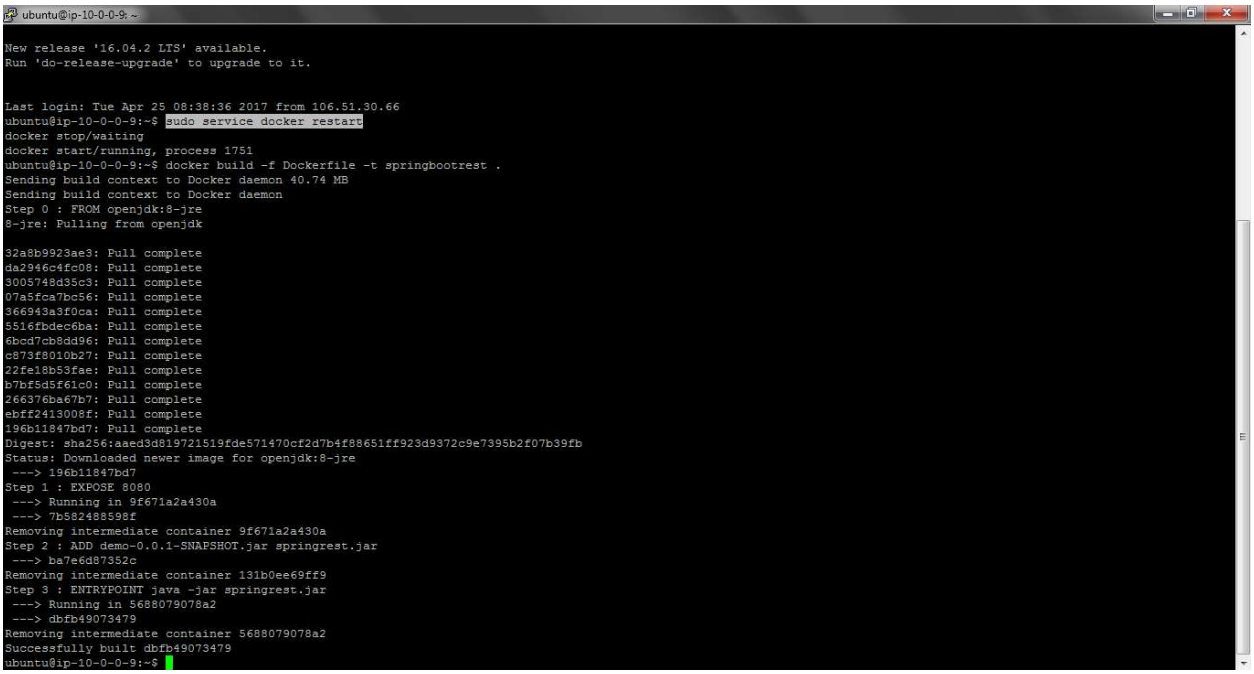

ubuntu@ip-10-0-0-9: ~
Commands:
attach Attach to a running container
build Build an image from a Dockerfile
commit Create a new image from a container's changes
cp Copy files/folders from a container's filesystem to the host path
create Create a new container
diff Inspect changes on a container's filesystem
events Get real time events from the server
exec Run a command in a running container
export Stream the contents of a container as a tar archive
history Show the history of an image
images List images
import Create a new filesystem image from the contents of a tarball
info Display system-wide information
inspect Return low-level information on a container or image
kill Kill a running container
load Load an image from a tar archive
login Register or log in to a Docker registry server
logout Log out from a Docker registry server
logs Fetch the logs of a container
port Lookup the public-facing port that is NAT-ed to PRIVATE_PORT
pause Pause all processes within a container
ps List containers
pull Pull an image or a repository from a Docker registry server
push Push an image or a repository to a Docker registry server
rename Rename an existing container
restart Restart a running container
rm Remove one or more containers
rmi Remove one or more images
run Run a command in a new container
save Save an image to a tar archive
search Search for an image on the Docker Hub
start Start a stopped container
stats Display a stream of a containers' resource usage statistics
stop Stop a running container
tag Tag an image into a repository
top Lookup the running processes of a container
unpause Unpause a paused container
version Show the Docker version information
wait Block until a container stops, then print its exit code
Run 'docker COMMAND --help' for more information on a command.
ubuntu@ip-10-0-0-9:~$

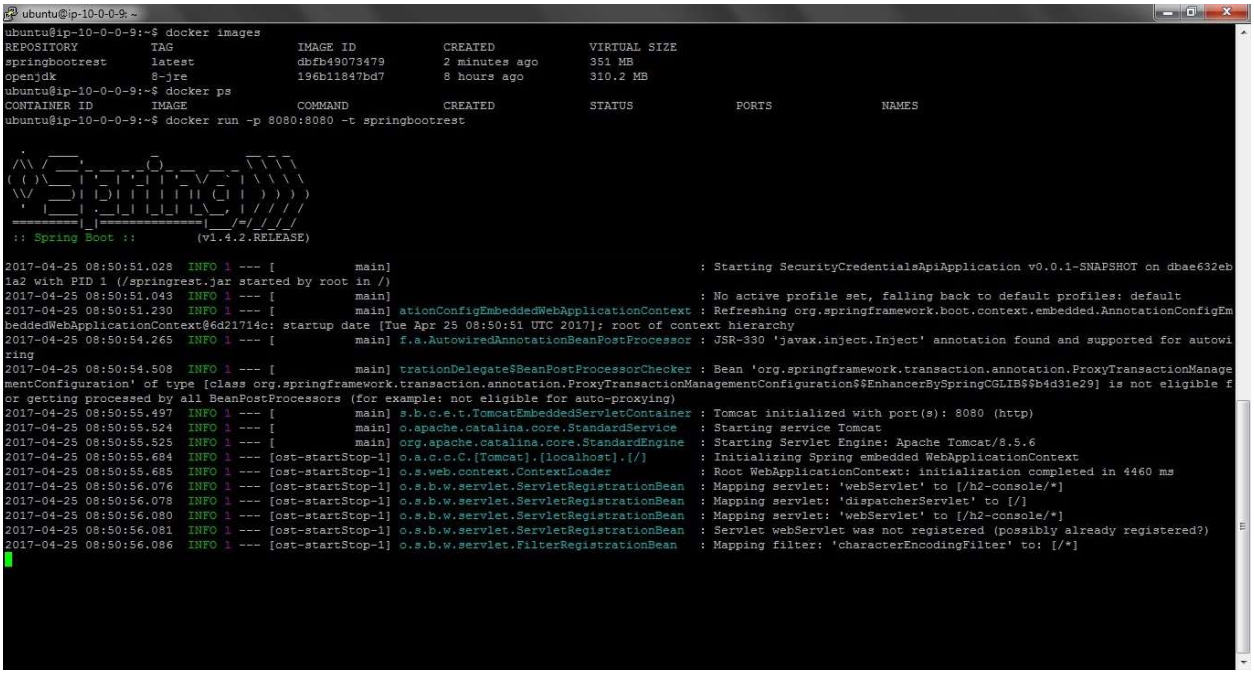

ubuntu - docker_springboot - WinSCP
Local Mark Files Commands Session Options Remote Help
Synchronize Queue Transfer Settings Default
docker_springboot New Session
C: Local Disk
Upload Edit Properties
C:\Office Work And SetUp Environments\Amazon Webservices\AWS Applications\docker-on-aws
Name Size Type Changed
.. Parent directory 4/25/2017 1:42:19 PM
demo-0.0.1-SNAPSHOT.jar 39,769 KB Executable Jar File 4/25/2017 12:44:05 PM
Dockerfile 1 KB File 4/25/2017 1:27:45 PM
0 B of 39,769 KB in 0 of 2
ubuntu
Find Files
Download Edit Properties
/home/ubuntu
Name Size Changed Rights Owner
4/25/2017 1:12:37 PM rwxr-xr-x root
demo-0.0.1-SNAPSHOT.jar 39,769 KB 4/25/2017 12:44:05 PM rw-rw-r-- ubuntu
Dockerfile 1 KB 4/25/2017 1:27:45 PM rw-rw-r-- ubuntu
0 B of 39,769 KB in 0 of 2
6 hidden
SFTP-3
0:22:57

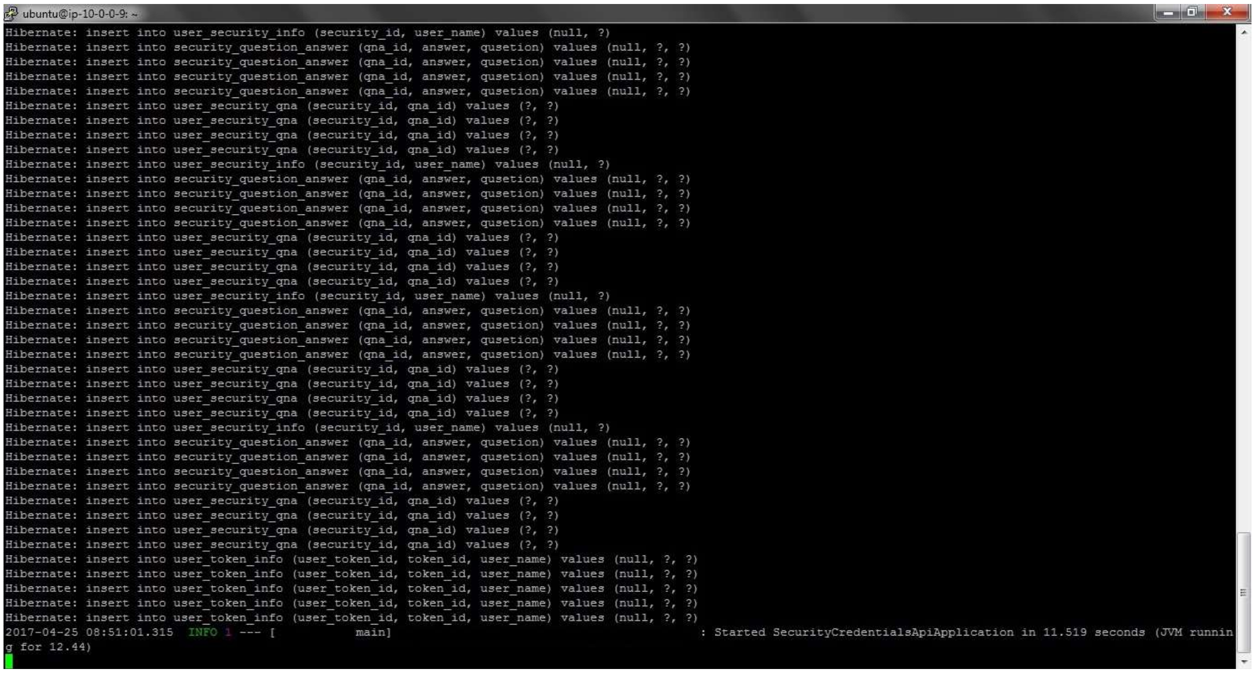




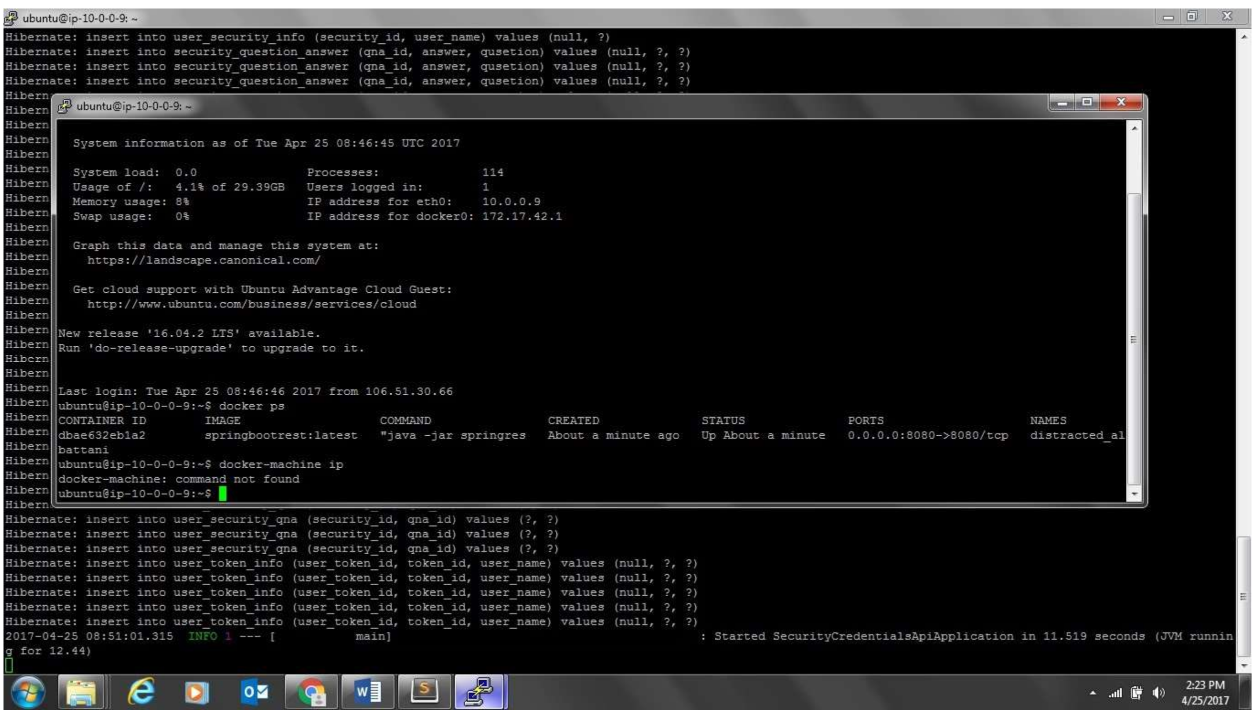
https://github.com/moby/moby/issues/5314
http://stackoverflow.com/questions/27528337/am-i-trying-to-connect-to-a-tls-enabled-daemon-without-tls
http://stackoverflow.com/questions/29294286/fata0000-get-http-var-run-docker-sock-v1-17-version-dial-unix-var-run-doc


ubuntu@ip-10-0-0-9: ~
New release '16.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
Last login: Tue Apr 25 08:38:36 2017 from 106.51.30.66
ubuntu@ip-10-0-0-9:~$ sudo service docker restart
docker stop/waiting
docker start/running, process 1751
ubuntu@ip-10-0-0-9:~$ docker build -f Dockerfile -t springbootrest .
Sending build context to Docker daemon 40.74 MB
Sending build context to Docker daemon
Step 0 : FROM openjdk:8-jre
8-jre: Pulling from openjdk
32a8b9923ae3: Pull complete
da2946c4fc08: Pull complete
3005748d35c3: Pull complete
07a5fca7bc56: Pull complete
366943a3f0ca: Pull complete
5516fbdec6ba: Pull complete
6bcd7cb8dd96: Pull complete
c873f8010b27: Pull complete
22fe18b53fae: Pull complete
b7bf5d5f61c0: Pull complete
266376ba67b7: Pull complete
ebff2413008f: Pull complete
196b11847bd7: Pull complete
Digest: sha256:aaed3d819721519fde571470cf2d7b4f88651ff923d9372c9e7395b2f07b39fb
Status: Downloaded newer image for openjdk:8-jre
---> 196b11847bd7
Step 1 : EXPOSE 8080
---> Running in 9f671a2a430a
---> 7b582488598f
Removing intermediate container 9f671a2a430a
Step 2 : ADD demo-0.0.1-SNAPSHOT.jar springrest.jar
---> ba7e6d87352c
Removing intermediate container 131b0ee69ff9
Step 3 : ENTRYPOINT java -jar springrest.jar
---> Running in 5688079078a2
---> dbfb49073479
Removing intermediate container 5688079078a2
Successfully built dbfb49073479
ubuntu@ip-10-0-0-9:~$

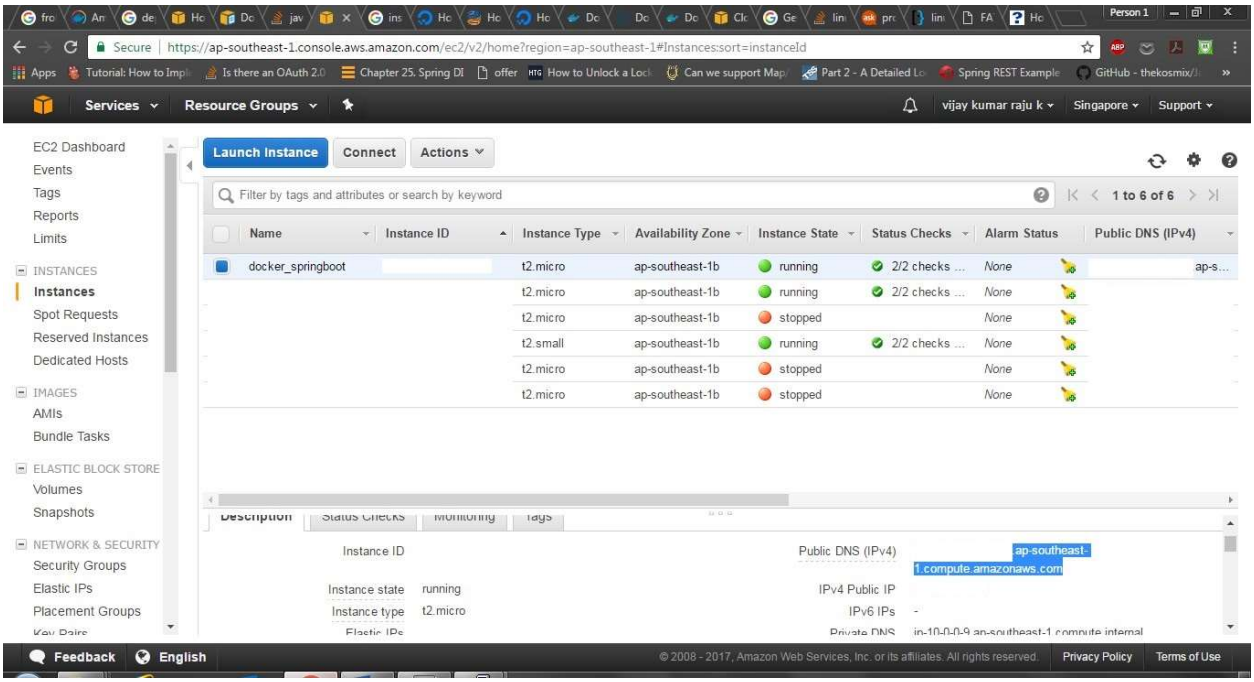

ubuntu@ip-10-0-0-9: ~
ubuntu@ip-10-0-0-9:~$ docker images
REPOSITORY TAG IMAGE ID CREATED VIRTUAL SIZE
springbootrest latest dbfb49073479 2 minutes ago 351 MB
openjdk 8-jre 196b11847bd7 8 hours ago 310.2 MB
ubuntu@ip-10-0-0-9:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ubuntu@ip-10-0-0-9:~$ docker run -p 8080:8080 -t springbootrest
:: Spring Boot :: (v1.4.2.RELEASE)
2017-04-25 08:50:51.028 INFO 1 --- [main] : Starting SecurityCredentialsApiApplication v0.0.1-SNAPSHOT on dbae632eb1a2 with PID 1 (/springrest.jar started by root in /)
2017-04-25 08:50:51.043 INFO 1 --- [main] : No active profile set, falling back to default profiles: default
2017-04-25 08:50:51.230 INFO 1 --- [main] ationConfigEmbeddedWebApplicationContext : Refreshing org.springframework.boot.context.embedded.AnnotationConfigEmbeddedWebApplicationContext@6d21714c: startup date [Tue Apr 25 08:50:51 UTC 2017]; root of context hierarchy
2017-04-25 08:50:54.265 INFO 1 --- [main] f.a.AutowiredAnnotationBeanPostProcessor : JSR-330 'javax.inject.Inject' annotation found and supported for autowiring
2017-04-25 08:50:54.508 INFO 1 --- [main] trationDelegate$BeanPostProcessorChecker : Bean 'org.springframework.transaction.annotation.ProxyTransactionManagementConfiguration' of type [class org.springframework.transaction.annotation.ProxyTransactionManagementConfiguration$$EnhancerBySpringCGLIB$$b4d31e29] is not eligible for getting processed by all BeanPostProcessors (for example: not eligible for auto-proxying)
2017-04-25 08:50:55.497 INFO 1 --- [main] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat initialized with port(s): 8080 (http)
2017-04-25 08:50:55.524 INFO 1 --- [main] o.apache.catalina.core.StandardService : Starting service Tomcat
2017-04-25 08:50:55.525 INFO 1 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet Engine: Apache Tomcat/8.5.6
2017-04-25 08:50:55.684 INFO 1 --- [ost-startStop-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2017-04-25 08:50:55.685 INFO 1 --- [ost-startStop-1] o.s.web.context.ContextLoader : Root WebApplicationContext: initialization completed in 4460 ms
2017-04-25 08:50:56.076 INFO 1 --- [ost-startStop-1] o.s.b.w.servlet.ServletRegistrationBean : Mapping servlet: 'webServlet' to [/h2-console/*]
2017-04-25 08:50:56.078 INFO 1 --- [ost-startStop-1] o.s.b.w.servlet.ServletRegistrationBean : Mapping servlet: 'dispatcherServlet' to [/]
2017-04-25 08:50:56.080 INFO 1 --- [ost-startStop-1] o.s.b.w.servlet.ServletRegistrationBean : Mapping servlet: 'webServlet' to [/h2-console/*]
2017-04-25 08:50:56.081 INFO 1 --- [ost-startStop-1] o.s.b.w.servlet.ServletRegistrationBean : Servlet webServlet was not registered (possibly already registered?)
2017-04-25 08:50:56.086 INFO 1 --- [ost-startStop-1] o.s.b.w.servlet.FilterRegistrationBean : Mapping filter: 'characterEncodingFilter' to: [/*]



```
ubuntu@ip-10-0-0-9: ~
Hibernate: insert into user_security_info (security_id, user_name) values (null, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_info (security_id, user_name) values (null, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_info (security_id, user_name) values (null, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_info (security_id, user_name) values (null, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
2017-04-25 08:51:01.315  INFO 1 --- [           main]                                          : Started SecurityCredentialsApiApplication in 11.519 seconds (JVM runnin
g for 12.44)
```



```
ubuntu@ip-10-0-0-9: ~
Hibernate: insert into user_security_info (security_id, user_name) values (null, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)
Hibernate: insert into security_question_answer (qna_id, answer, qusetion) values (null, ?, ?)

ubuntu@ip-10-0-0-9: ~

  System information as of Tue Apr 25 08:46:45 UTC 2017

  System load:  0.0               Processes:              114
  Usage of /:   4.1% of 29.39GB   Users logged in:        1
  Memory usage: 8%                IP address for eth0:    10.0.0.9
  Swap usage:   0%                IP address for docker0: 172.17.42.1

  Graph this data and manage this system at:
    https://landscape.canonical.com/

  Get cloud support with Ubuntu Advantage Cloud Guest:
    http://www.ubuntu.com/business/services/cloud

New release '16.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Tue Apr 25 08:46:46 2017 from 106.51.30.66
ubuntu@ip-10-0-0-9:~$ docker ps
CONTAINER ID        IMAGE                 COMMAND                  CREATED              STATUS              PORTS                    NAMES
dbae632eb1a2        springbootrest:latest   "java -jar springres   About a minute ago   Up About a minute   0.0.0.0:8080->8080/tcp   distracted_al
battani
ubuntu@ip-10-0-0-9:~$ docker-machine ip
docker-machine: command not found
ubuntu@ip-10-0-0-9:~$

Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_security_qna (security_id, qna_id) values (?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
Hibernate: insert into user_token_info (user_token_id, token_id, user_name) values (null, ?, ?)
2017-04-25 08:51:01.315  INFO 1 --- [           main]                                          : Started SecurityCredentialsApiApplication in 11.519 seconds (JVM runnin
g for 12.44)

2:23 PM
4/25/2017
```



Deployment working

http://docs.aws.amazon.com/AmazonECS/latest/developerguide/docker-basics.html
https://www.liquidweb.com/kb/how-to-install-docker-on-ubuntu-14-04-lts/
https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-compose-on-ubuntu-14-04
https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-on-ubuntu-16-04
https://store.docker.com/editions/community/docker-ce-server-ubuntu?tab=description