Solved - Spring Cloud Config Server invalid SSH key on a MacOS Mojave

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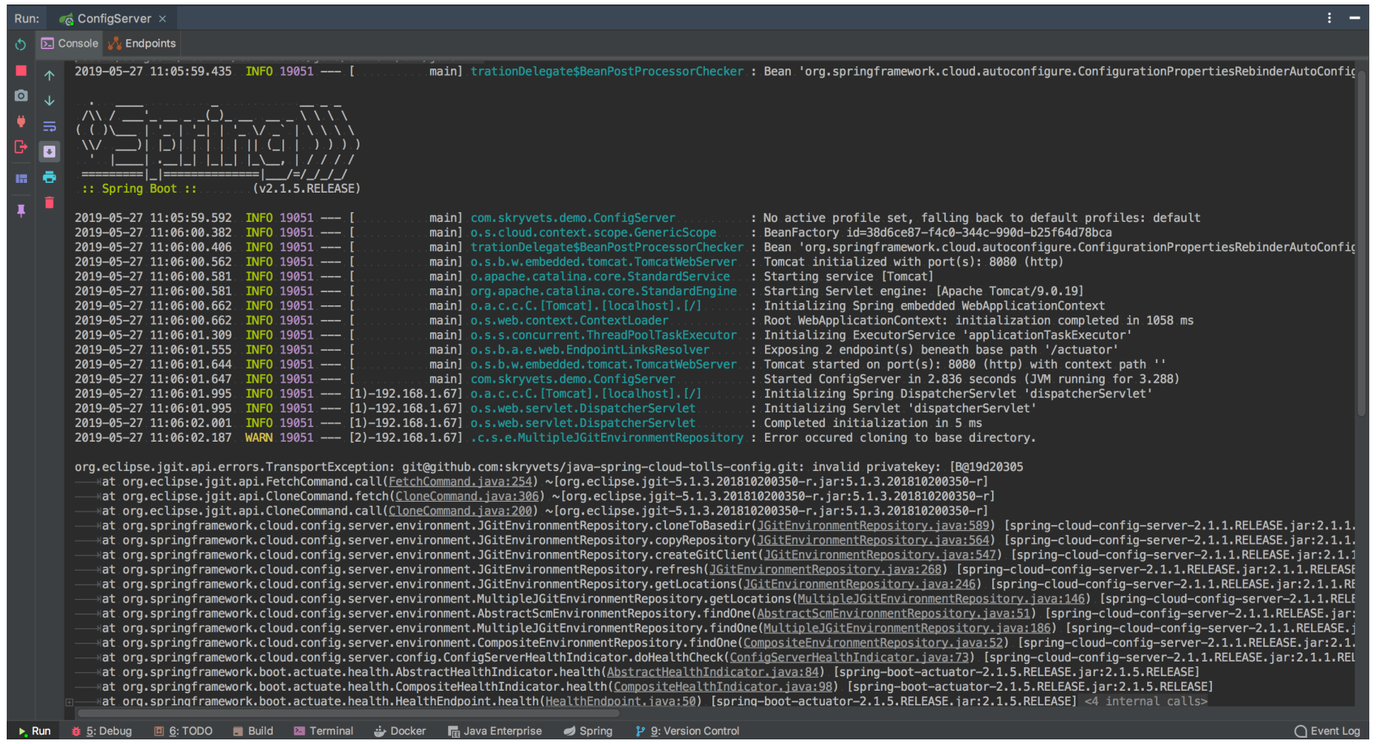


Introduction

More and more often it's all about configuration and some hidden "setting" which does the job...

Spring Config Server allows to fetch a configuration from the remote git repository via https:

```
spring:
  cloud:
    config:
      server:
        git:
          uri: https://github.com/my-organization/my-config-repo.git
          username: goat
          password: mystrongpa$$word
```

I'm not a security expert, but this approach has an obvious downside ("username" and "password" in code). One might argue that it's possible to inject the values via environment variables or using some other technique. Nonetheless, the main flaw is the idea of supplying "username" and "password" in the first place.

An alternative way and the problem

An better technique is to use ssh key:

```
spring:
  cloud:
    config:
      server:
        git:
          uri: git@github.com:my-organization/my-config-repo.git
```

It's a good solution, but **doesn't work out of the box**. According to spring docs it should:

> *If you do not use HTTPS and user credentials, SSH should also work out of the box when you store keys in the default directories (`~/.ssh`) and the URI points to an SSH location, such as `git@github.com:configuration/cloud-configuration` . It is important that an entry for the Git server be present in the `~/.ssh/known_hosts` file and that it is in `ssh-rsa` format. Other formats (such as `ecdsa-sha2-nistp256`) are not supported. To avoid surprises, you should ensure that only one entry is present in the `known_hosts` file for the Git server and that it matches the URL you provided to the config server. If you use a hostname in the URL, you want to have exactly that (not the IP) in the `known_hosts` file. The repository is accessed by using JGit, so any documentation you find on that should be applicable. HTTPS proxy settings can be set in `~/.git/config` or (in the same way as for any other JVM process) with system properties (`-Dhttps.proxyHost` and `-Dhttps.proxyPort`).*

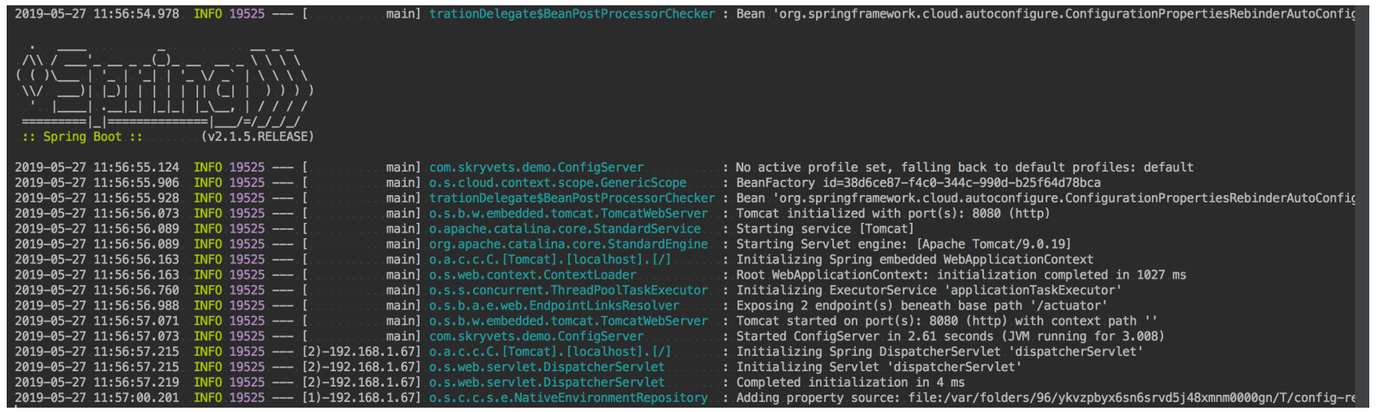
After googling around I found multiple threads on StackOverflow that helped other people. Particularly, this one Spring Cloud Config cannot clone private bitbucket repository using ssh key. However, after applying proper configuration in my `~/.ssh/config` file it still didn't work (as you can see from the screenshot for this post).

The solution

Turns out the problem is hidden in the bowels of Mac OS Mojave (and any later version). By default, It creates the key in different, new "OpenSSH" format where Spring only supports `ssh-rsa` (more on this here). The solution is to re-generate ssh key for the account using the following command:

```
ssh-keygen -m PEM -t rsa -b 4096 -C "your_email@example.com"
```

Once I applied newly generated key, the application was able to start successfully:



Thanks to Wpigott who pointed this solution.

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"To avoid surprises, you should ensure that only one entry is present in the

file for the Git server and that it matches the URL you provided to the config server." I am confused by this.I

have this in known_hosts

$ cat known_hosts

bitbucket.org,18.205.93.1 ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAAQEAubiN81eDcafrgMeLzaFPsw2kNvEcqTKl/VqLat
/xxxxxxxxxxx<siomemore stuff="">==

So what should known_hosts have ?

When I start the config client spring boot , I immediately see in config server console:

org.eclipse.jgit.api.errors.TransportException: git@bitbucket.org:<myuserid>c/config-repo.git: Auth fail
at org.eclipse.jgit.api.FetchC...(FetchCommand.java:254) ~[org.eclips

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Sergey Kryvets **Mod** vivek • 2 years ago • edited

That's the quote from the official spring docs.
My understanding that
only one entry is present in the file for the Git server

- *it matches the URL you provided to the config server*
Url you have in your known_hosts (like on your example bitbucket.org) matches the url in your application properties or yml file:
spring:
cloud:
config:
server:
git:
uri: bitbucket.org/path-to-your-repo

Now, if that correct, and you still don't have it working (and as you showed in your example you have ssh-rsa which is supported encryption format) are you sure that you can access that repository from your local machine directly (without using spring server)? Try out `ssh -T bitbucket.org` command as it's described in more details here - https://help.github.com/en/....