**Goals**

●      Push a simple Java/Spring application to Cloud Foundry

●      Observe and scale a running application

**Prerequisites**

To complete these steps, you must have the CLI installed, a Cloud Foundry account (Such as Pivotal Web Services).

**Steps**

**Connect**:

1.     Open a command prompt on your system.  Run the “cf” command.  If you do not see detailed output of Cloud Foundry commands, return to the prerequisites.

2.     Use “cf login” to connect to Cloud Foundry

a.     Use the “-a“ option to specify the “api” of the Cloud Foundry instance you with to connect to.  For Pivotal Web Services, this is “api.run.pivotal.io”.

b.     Use the “-u” option to specify the email address under which you are registered, or you can simply allow the interface to prompt you

c.     Do NOT use the “-p” option for password.  Instead, let the interface prompt you for your password.

**Push**:

3.     Change folders to the location where you downloaded the springmusic war from <https://github.com/ukannan/training-pcf>

4.     Run the “cf push” command to push this application to Cloud Foundry

a.     Use any value you like for the application name.  We suggest something brief and easy to type.

b.     Use the “-n” option to specify the host.  This value must be unique within the domain used by Cloud Foundry (cfapps.io in the case of Pivotal Web Services).

c.     Use the “-m” option to specify memory.  This application will run fine with “512M” of memory.

d.     Use the “-p” option to specify the package to upload.  This is a Java application, and a WAR file has already been built for you ”spring-music.war”.

5.     Observe the push log output.  Can you identify the different stages of the process?

**Observe**:

6.     When the process is complete, identify the URL of the application.  Open a browser and connect to this URL to make sure that the application comes up.

7.     Run the “cf logs“ command for your app.

8.     Return to the browser, click the links, make changes to the data, then return to the command line and observe the generated log activity.

**Scale**:

9.     Open the Web Console associated with your Cloud Foundry instance.  For Pivotal Web Services, this is at [http://run.pivotal.io](http://run.pivotal.io/).  Login and navigate to the organization and space that your application was pushed to.

10.  Open the details page associated with your application.  Change the number of instances to 4 and save your changes.  From the browser, refresh the application’s web page repeatedly and notice that the application does not go down while it is being scaled.  Return to the command prompt and observe the activity that occurs as Cloud Foundry scales your application horizontally.

11.  Back on the web console, scroll down to the “instances” section to observe the running instances.

12.  Congratulations, you have completed this exercise!  If you have time look at the bonus.  If you are done, stop the application.

**Bonus**:

13.  If you are interested, change the memory settings, and experiment with adding / removing routes.