Buildpack

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Estimated Time: 25 minutes

Requirements

This lab is part of a workshop available at https://github.com/Pivotal-Field-Engineering/DevNexus2017
General Pre-Requisites are available in the Readme.md

In general the Labs should be done in numerical order since they are interdependent.

What you will learn

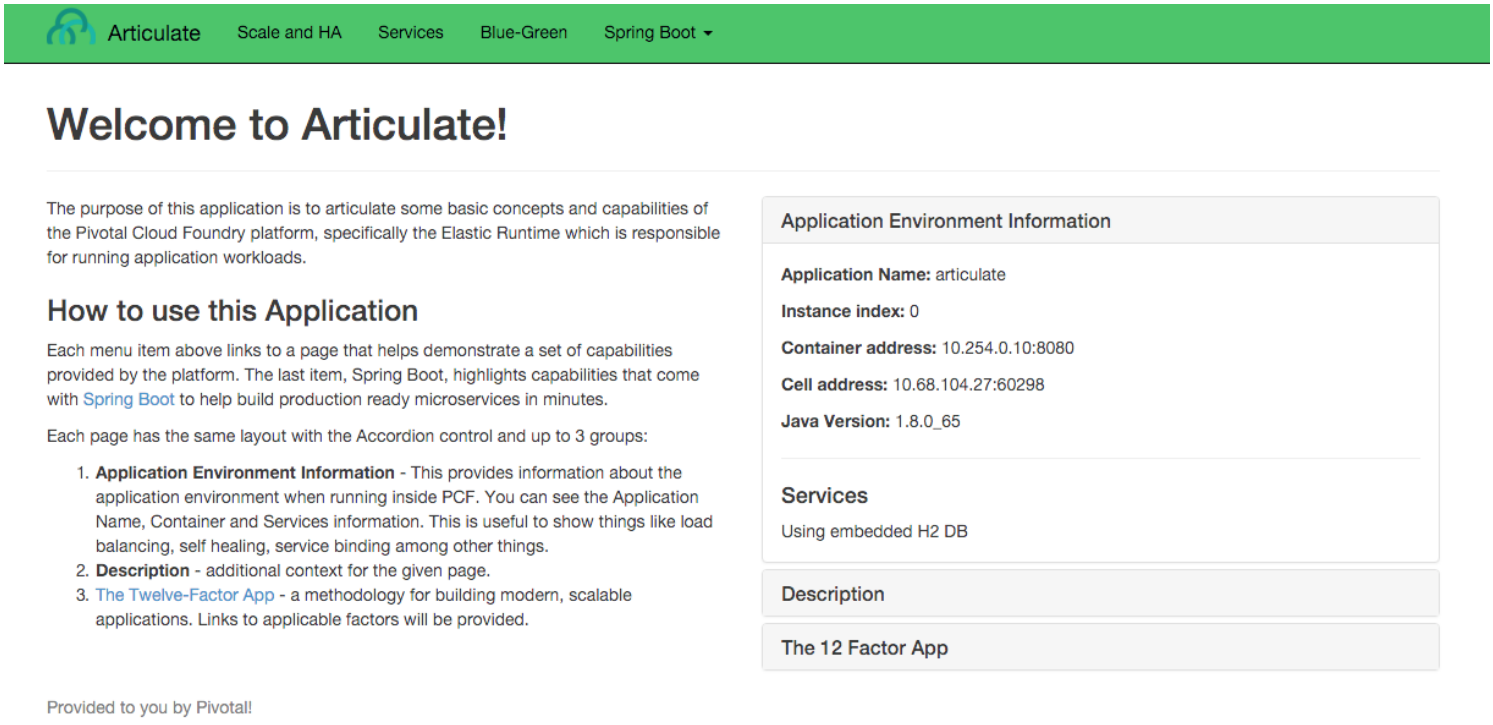
- How to use a custom buildpack
- How to configure the Java Buildpack

Exercises

Use a Custom Buildpack

1) Review the documentation on deploying with custom buildpacks (http://docs.pivotal.io/pivotalcf/buildpacks/custom.html#deploying-with-custom-buildpacks) and how dependencies are handled with the Java Buildpack online package (https://github.com/cloudfoundry/java-buildpack#online-package) and the offline package (https://github.com/cloudfoundry/java-buildpack#offline-package).

2) Review the Java Version reported by `articulate` .



3) Review which buildpack is in use.

```
$ cf app articulate
```

4) Push `articulate` again, but this time specify a custom buildpack. In this case, we will use the latest version of the Java Buildpack (https://github.com/cloudfoundry/java-buildpack) on GitHub.

```
$ cd sample-apps/articulate

$ cf push articulate -p ./articulate-0.0.1-SNAPSHOT.jar -b https://githu
b.com/cloudfoundry/java-buildpack.git
```

5) Using your browser, refresh the `articulate` application.

It's likely (but not required) that the `Java Version` changed.

What Just Happened?

We instructed our application to use a custom buildpack (as opposed to a system provided one).

In this case, we used the Java Buildpack source on Github as our custom buildpack. The Java Buildpack source is continuously updated and it is an online (https://github.com/cloudfoundry/java-buildpack#online-package) package of the buildpack. Meaning it has access to all dependencies via the network (it has access to all JRE versions, etc). Whereas, the system provided Java buidpack is offline (https://github.com/cloudfoundry/java-buildpack#offline-package), with a limited set of dependencies. For both the online and offline pacakges, unless the Java version is specified the application is run with the latest version of Java available to the buildpack.

Change the Java version

1) Review the Java Buildpack configuration and extension documentation (https://github.com/cloudfoundry/java-buildpack#configuration-and-extension).

2) Let's assume that we want to run `articulate` on a specific version Java.

```
$ cf set-env articulate JBP_CONFIG_OPEN_JDK_JRE "{jre: { version: 1.8.0_4
5 }}"
```

3) Using your browser, refresh the `articulate` application.

QUESTION: Is the `articulate` running with `1.8.0_45` ? Why not?

4) Restage `articulate` .

```
$ cf restage articulate
```

QUESTION: Would `cf restart` be sufficient instead of `cf restage` ? Why not?

5) Using your browser, refresh the `articulate` application.

Questions

- What other other items are easily customized with the Java Buildpack?
- If you use Java, what items do you think would need customization in your environment?

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