EXERCISE 06 – MAKE YOUR APPLICATION RESILIENT

SAP Partner Workshop	**30 min**

Description

In this exercise, you'll learn how

- To make your application resilient
- to implement caching
- to implement fallback

For further reading on SAP Cloud SDK, click link below.
https://www.sap.com/germany/developer/topics/s4hana-cloud-sdk.html

Target group

- Developers
- People interested in learning about S/4HANA extension and SAP Cloud SDK

Goal

The goal of this exercise is to build a basic extension app on Cloud Foundry using Business Partner Example.

Prerequisites

Here below are prerequisites for this exercise.

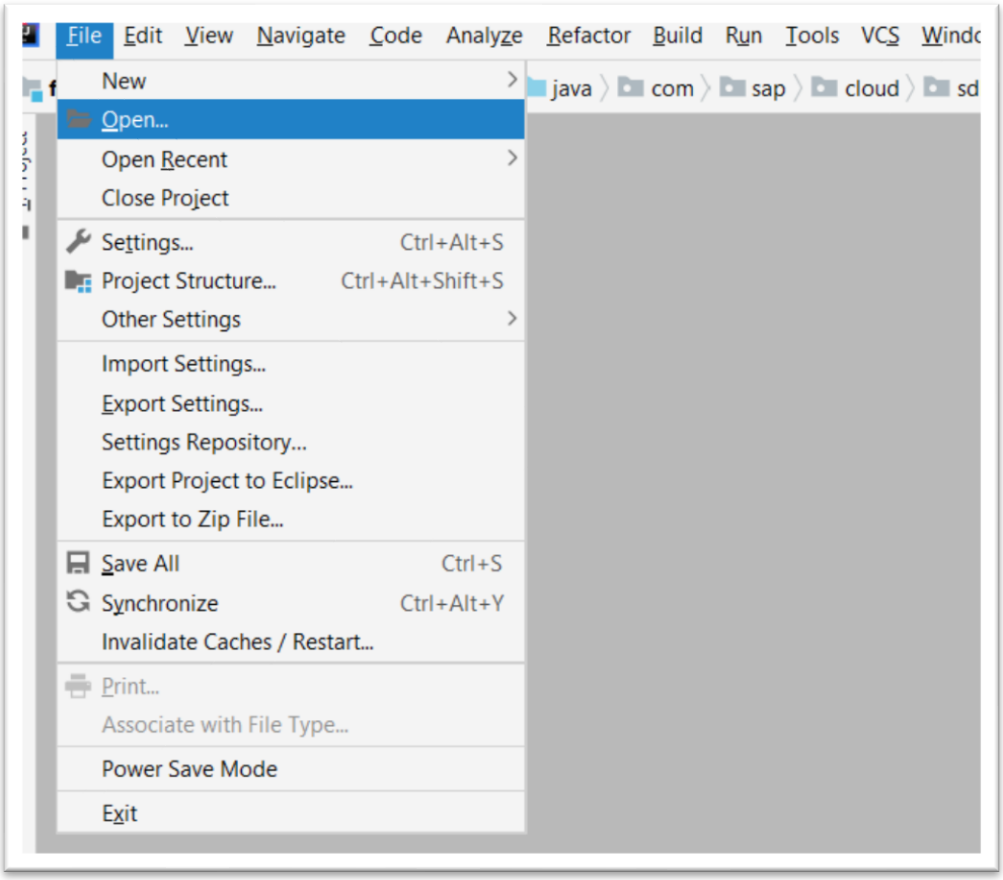
- A trial account on the SAP Cloud Platform. You can get one by registering here https://account.hanatrial.ondemand.com
- Cloud Foundry CLI Tool
- Apache Maven
- Java JDK 8
- IntelliJ IDEA

Refer to Exercise 2 to get step-by-step guide on system setup and pre-requisites.

Step 1 – Download and build the project

Download the Exercise_5_Starting.zip file from here and extract it locally.

Similar to the previous exercise, open the project in IntelliJ Web IDEA.



Open the Servlet file *CreateAddressCommand* and check *constructor* method.

Explore the servlet GetAllBusinessPartnersCommand and observe the caching implementation.

Build the project using below command

```
mvn clean package
```

Step 3 - Deploy to Cloud Foundry

In order to deploy applications on SAP Cloud Foundry we need to provide cf command with an API endpoint. The API endpoint depends on the region you chose for your account.

To get the API end point, refer to the SAP Cloud Cockpit.

For example, in case of EU region, it is - *https://api.cf.eu10.hana.ondemand.com*

Enter the following command.

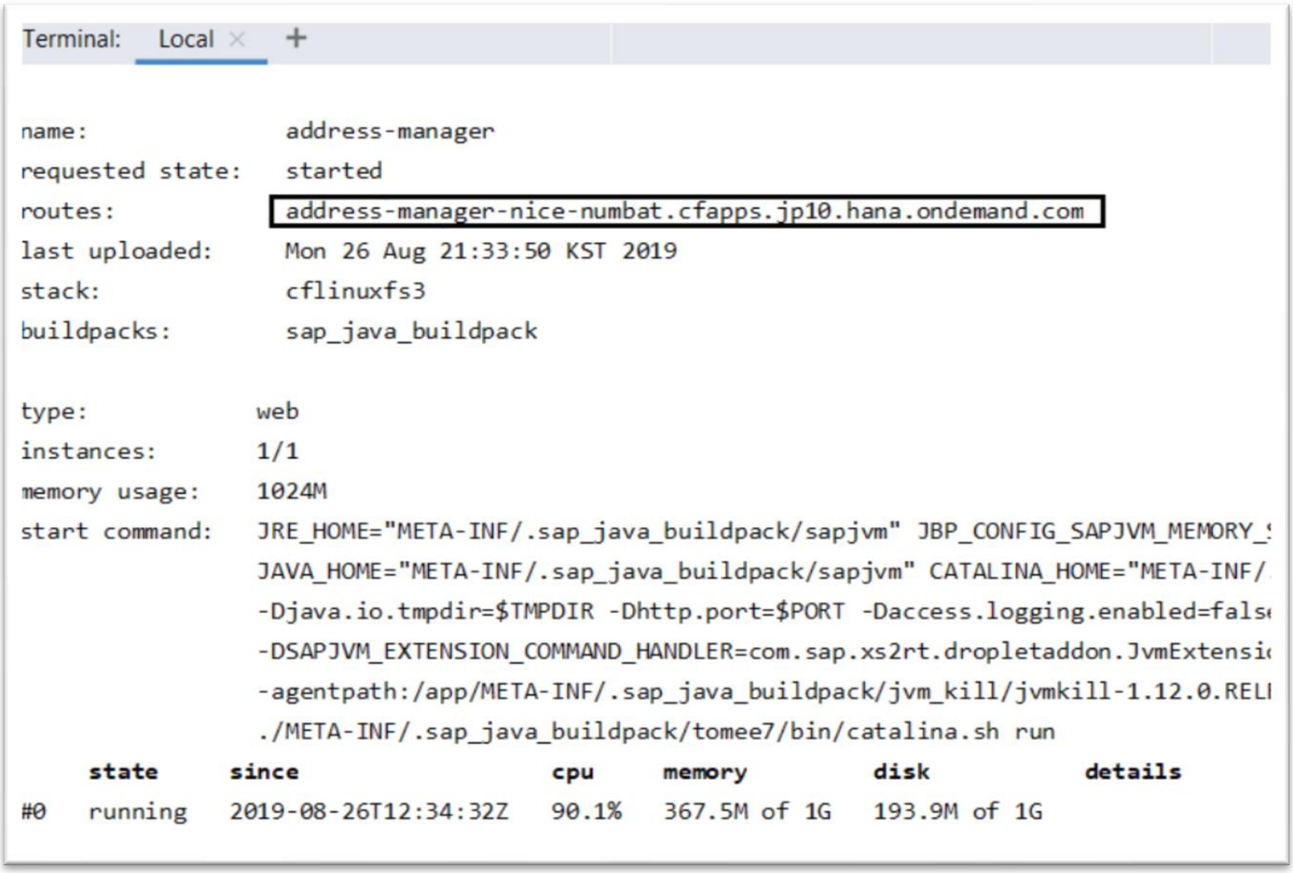
```
cf api https://api.cf.eu10.hana.ondemand.com
cf login
```

Enter your user id and password for SAP Cloud Platform account.

Now, enter below command to deploy your application to SAP Cloud Platform Cloud Foundry environment.

```
cf push
```

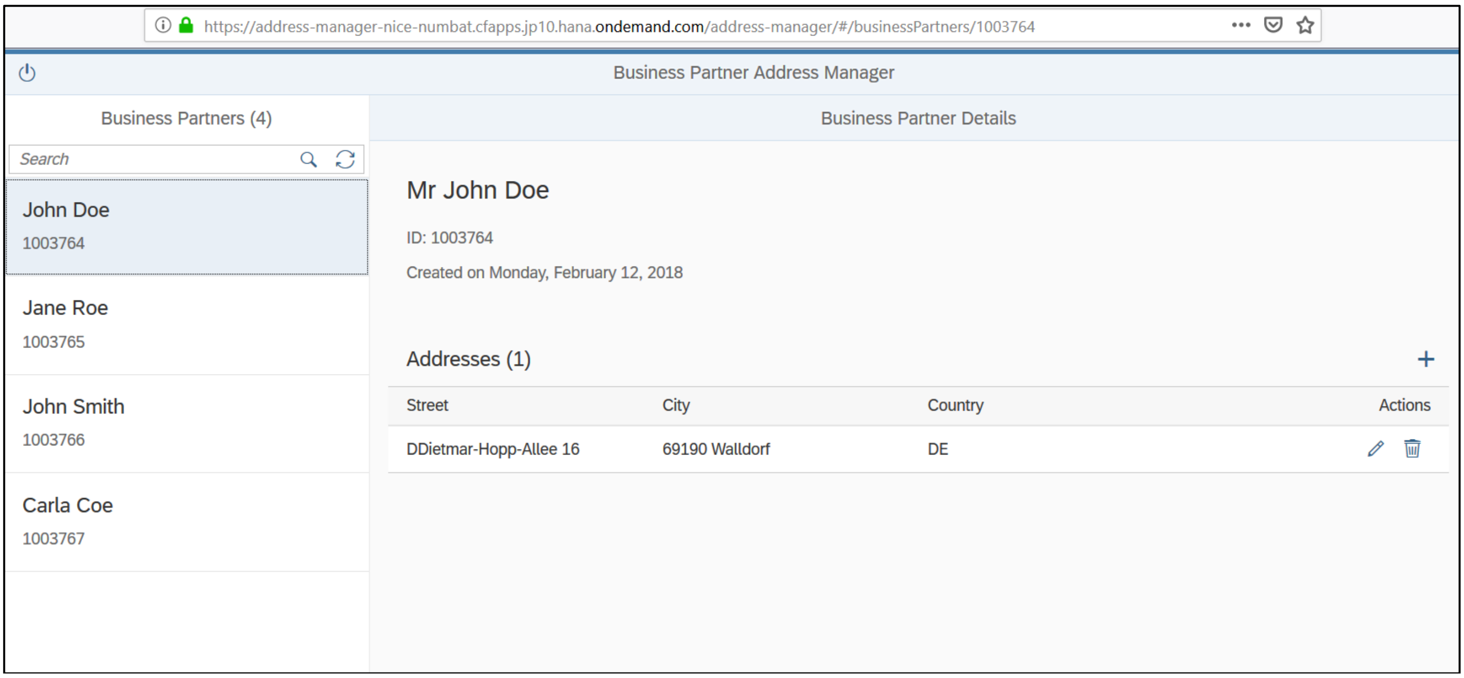
After the deployment is finished, output should look like this:



```
name:               address-manager
requested state:    started
routes:             address-manager-nice-numbat.cfapps.jp10.hana.ondemand.com
last uploaded:      Mon 26 Aug 21:33:50 KST 2019
stack:              cflinuxfs3
buildpacks:         sap_java_buildpack

type:             web
instances:        1/1
memory usage:     1024M
start command:    JRE_HOME="META-INF/.sap_java_buildpack/sapjvm" JBP_CONFIG_SAPJVM_MEMORY_
                  JAVA_HOME="META-INF/.sap_java_buildpack/sapjvm" CATALINA_HOME="META-INF/
                  -Djava.io.tmpdir=$TMPDIR -Dhttp.port=$PORT -Daccess.logging.enabled=fals
                  -DSAPJVM_EXTENSION_COMMAND_HANDLER=com.sap.xs2rt.dropletaddon.JvmExtensi
                  -agentpath:/app/META-INF/.sap_java_buildpack/jvm_kill/jvmkill-1.12.0.REL
                  ./META-INF/.sap_java_buildpack/tomee7/bin/catalina.sh run
     state     since                  cpu     memory         disk           details
#0   running   2019-08-26T12:34:32Z   90.1%   367.5M of 1G   193.9M of 1G
```

Now we can visit the application under its corresponding URL as it is shown in the output above. Take the value from *“routes: ...”* and append the ***“/address-manager”*** path. It should show the UI as below.



https://address-manager-nice-numbat.cfapps.jp10.hana.ondemand.com/address-manager/#/businessPartners/1003764

Business Partner Address Manager

John Doe
1003764

Jane Roe
1003765

John Smith
1003766

Carla Coe
1003767

Mr John Doe

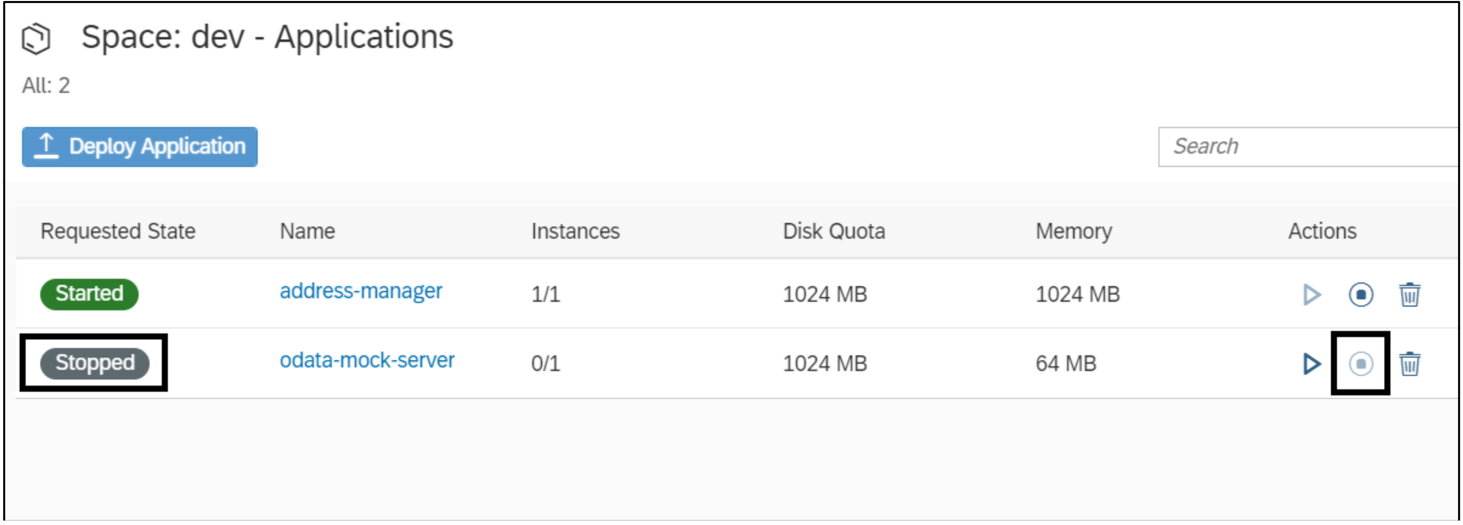
ID: 1003764

Created on Monday, February 12, 2018

Addresses (1)

Street	City	Country	Actions
DDietmar-Hopp-Allee 16	69190 Walldorf	DE	

Go to SAP Cloud Platform cockpit and stop the mock data server.



Space: dev - Applications

All: 2

Requested State	Name	Instances	Disk Quota	Memory	Actions
Started	address-manager	1/1	1024 MB	1024 MB	
Stopped	odata-mock-server	0/1	1024 MB	64 MB	

Run the UI again and observe the behavior.

Congratulation! You have successfully made your application resilient.