

Final Project - Product Price Comparison Application



Estimated Time Needed: 1.5 hours

- In this final project, you will create microservices and use them in a frontend application.

Objectives:

After completing this lab, you will be able to:

1. Deploy application on Code Engine and Create APIs.
2. Use microservices in applications.

Set-up : Deploy Applications

1. Open the Code Engine CLI.
2. Deploy the Product Details python application which provides API endpoints that can be used to get the products details.

build-source - https://github.com/ibm-developer-skills-network/dealer_evaluation_backend.git

build-context-dir - products_list

port - 5000

1. 1
1. `ibmcloud ce application create --name prodlist --image us.icr.io/${SN_ICR_NAMESPACE}/prodlist --registry-secret icr-secret --port 5000 --build-conte`

Copied!

Copy the deployment URL and save it in a notepad or other text editors.

Take a screenshot of the successful deployment and save it as product_details_deploy.png.

```
theia@theiadosker-lavanyas:/home/project$ ibmcloud ce application create --name prodlist
--image us.icr.io/${SN_ICR_NAMESPACE}/prodlist --registry-secret icr-secret --port 5000
--build-context-dir products_list --build-source https://github.com/ibm-developer-skill
s-network/dealer_evaluation_backend.git
Creating application 'prodlist'...
Submitting build run 'prodlist-run-230110-074851157'...
Creating image 'us.icr.io/sn-labs-lavanyas/prodlist:230110-1248-j11hw'...
Waiting for build run to complete...
Build run status: 'Running'
Build run completed successfully.
Run 'ibmcloud ce buildrun get -n prodlist-run-230110-074851157' to check the build run s
tatus.
Waiting for application 'prodlist' to become ready.
Configuration 'prodlist' is waiting for a revision to become ready.
Ingress has not yet been reconciled.
Waiting for load balancer to be ready.
Run 'ibmcloud ce application get -n prodlist' to check the application status.
OK
https://prodlist.xj562h09ws5.us-south.codeengine.appdomain.cloud
```

3. Deploy the Dealer Pricing Details Node.js application, which provides API endpoints that can be used to get the dealer pricing details.

Note: Please use the below parameters for the deploy command

build-source - https://github.com/ibm-developer-skills-network/dealer_evaluation_backend.git

build-context-dir - dealer_details

port - 8080

name - dealerdetails

image - us.icr.io/\${SN_ICR_NAMESPACE}/dealerdetails

Copy the deployment URL and save it in a notepad or other text editors.

Take a screenshot of the successful deployment and save it as dealer_details_deploy.png.

```
theia@theiadocker-lavanyas:/home/project$ ibmcloud ce application create --name dealerdet
ails --image us.icr.io/${SN_ICR_NAMESPACE}/dealerdetails --registry-secret icr-secret --p
ort 8080 --build-context-dir dealer_details --build-source https://github.com/ibm-develop
er-skills-network/dealer_evaluation_backend.git
Creating application 'dealerdetails'...
Submitting build run 'dealerdetail-run-230110-075151354'...
Creating image 'us.icr.io/sn-labs-lavanyas/dealerdetails:230110-075151354-http'...
Waiting for build run to complete...
Build run status: 'Running'
Build run completed successfully.
Run 'ibmcloud ce buildrun get -n dealerdetails-run-230110-075151354' to check the build r
un status.
Waiting for application 'dealerdetails' to become ready.
Configuration 'dealerdetails' is waiting for a Revision to become ready.
Ingress has not yet been reconciled.
Waiting for load balancer to be ready.
Run 'ibmcloud ce application get -n dealerdetails' to check the application status.
OK
https://dealerdetails.xj562h09ws5.us-south.codeengine.appdomain.cloud
```

Modify and Deploy Frontend application

1. In the terminal, go to /home/projects directory.

1. 1

1. cd /home/projects

Copied!

2. Clone the repository https://github.com/ibm-developer-skills-network/dealer_evaluation_frontend.git in your /home/project directory.

Take a screenshot of the successful git cloning and save it as git_clone.png.

```
theia@theiadocker-lavanyas:/home/project$ git clone https://github.com/ibm-developer-skills-network/dealer_evaluation_frontend.git
Cloning into 'dealer_evaluation_frontend'...
remote: Enumerating objects: 16, done.
remote: Counting objects: 100% (16/16), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 16 (delta 2), reused 14 (delta 1), pack reused 0
Unpacking objects: 100% (16/16), done.
theia@theiadocker-lavanyas:/home/project$ cd dealer_evaluation_frontend/
```

3. Change to the dealer_evaluation_frontend directory.

4. Go to index.html on the browser and edit the place holder values (http://localhost:5000/ and http://localhost:8080/), copy the deployment URLs you copied in the appropriate location. Make sure you end the URLs with a /.

Take a screenshot of the changes and save it as index_urlchanges.png.

```

File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
index.html d..M
PROJECT
dealer_evaluat...
html
index.html M
.gitignore
app.py
Dockerfile
LICENSE
products.json
README.md
requirements.txt
Code Engine
index.html x
dealer_evaluation_frontend > html > index.html
1 <html>
2 <script src="https://cdn.jsdelivr.net/npm/axios/dist/axios.min.js"></script>
3
4 <body>
5   <div>
6     <div>
7       <div>
8         <div>
9           <div>
10            <div>
11              <div>
12                <div>
13                  <div>
14                    <div>
15                      <div>
16                        <div>
17                          <div>
18                            <div>
19                              <div>
20                                <div>

```

5. Deploy the frontend application by pointing the build-source to the current directory.

build-source - .

port - 5001

name - frontend

image - us.icr.io/\${SN_ICR_NAMESPACE}/frontend

Take a screenshot of the successful deployment and name it frontend_deploy.png.

```

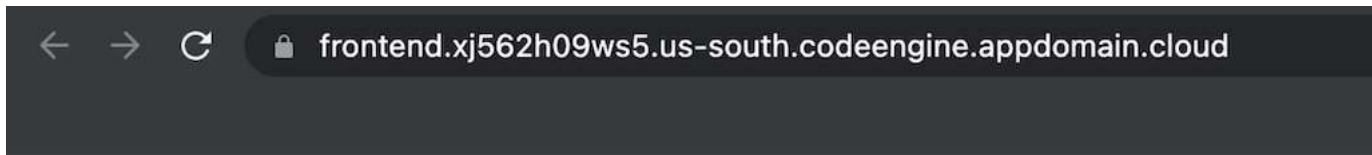
theia@theiadocker-lavanyas:/home/project/dealer_evaluation_frontend$ ibmcloud ce application create --name frontend --ima
ge us.icr.io/${SN_ICR_NAMESPACE}/frontend --registry-secret icr-secret --port 5001 --build-source .
Creating application 'frontend'...
Packaging files to upload from source path '.'...
Submitting build run 'frontend-run-230110-080653852'...
Creating image 'us.icr.io/${SN_ICR_NAMESPACE}/frontend:230110-1306-lccc'...
Waiting for build run to complete..
Build run status: 'running'
Build run completed successfully.
Run 'ibmcloud ce build run get -n frontend-run-230110-080653852' to check the build run status.
Waiting for application 'frontend' to become ready.
Configuration 'frontend' is waiting for a Revision to become ready.
Ingress has not yet been reconciled.
Waiting for load balancer to be ready.
Run 'ibmcloud ce application get -n frontend' to check the application status.
OK
https://frontend.xj562h09ws5.us-south.codeengine.appdomain.cloud

```

6. Click the link to load the homepage. Please note the page takes time to load the first time you access it.

7. Click the products drop down to see if the products have been populated.

Take a screenshot of the home page showing the products list and name it homepage.png.

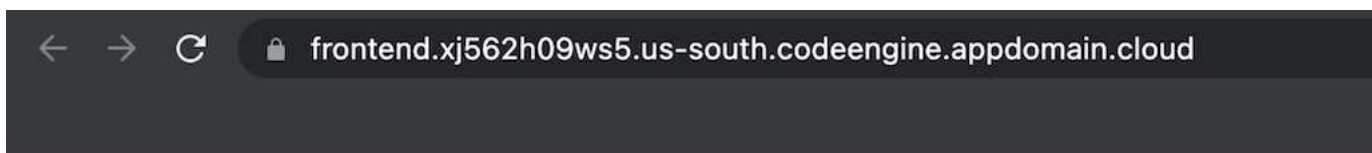


Products price comparison

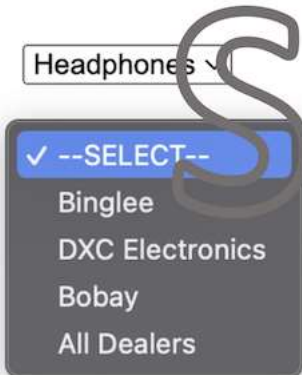


8. After selecting the product from the dropdown, the dealers that supply the product should be displayed.

Take a screenshot of the entire page showing the product chosen, and dealers that supply the listed product returned by the microservice and name it `product_dealer.png`.



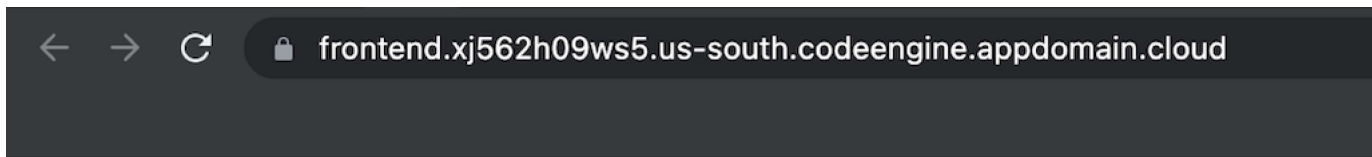
Products price comparison



9. After the dealers dropdown populates, choose a particular dealer for the product and see if the price charged by that dealer is displayed.

Allow 10 to 20 secs to load the page.

Take a screenshot of the entire page showing the product chosen, dealer chosen, and the price returned by the microservice and name it `product_dealer_price.png`.



Products price comparison

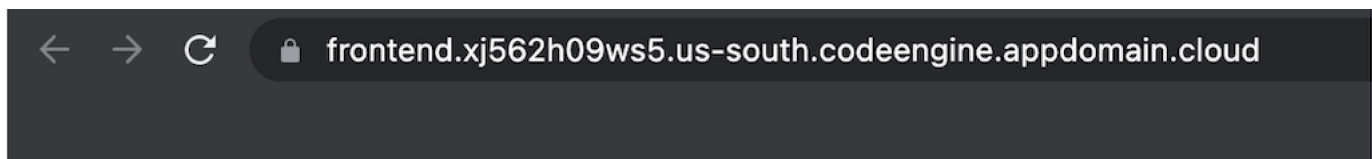
Headphones

Binglee

Sample

10. Choose All Dealers option for a product (make sure you choose a product which has more than one dealer). Pricing of all dealers offering the product should be shown on the screen.

Take a screenshot of the entire page showing the product chosen, All Dealers option chosen, and the prices charged by all dealers returned by the microservice and name it product_all_dealers_prices.png.



Products price comparison

Headphones

All Dealers

Sample

Congratulations! You have completed the Final project!

Summary:

In this lab, you created two backend applications to be used as microservices on Code Engine and deployed one front-end application that uses the microservices.

Author(s)

Lavanya T S

Changelog

Date	Version	Changed by	Change Description
10-01-2023	1.0	Lavanya T S	Initial version created
18-01-2023	2.0	Lavanya Rajalingam	Minor updates based on Beta Testing

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