

# 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](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-context-dir products_list --build-source https://github.com/ibm-developer-skills-network/dealer_evaluation_backend.git`

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@theiadocker-lavanyas:/home/projects$ 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-skills-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 status.
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](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 dealerdetails --image us.icr.io/${SN_ICR_NAMESPACE}/dealerdetails --registry-secret icr-secret --port 8080 --build-context-dir dealer_details --build-source https://github.com/ibm-developer-skills-network/dealer_evaluation_backend.git
Creating application 'dealerdetails'...
Submitting build run 'dealerdetails-run-230110-07513354'...
Creating image 'us.icr.io/${SN_ICR_NAMESPACE}/dealerdetails:230110-07513354'...
Waiting for build run to complete...
Build run status: 'Running'
Build run completed successfully.
Run 'ibmcloud ce buildrun get -n dealerdetails-run-230110-07513354' to check the build run 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

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2. Clone the repository [https://github.com/ibm-developer-skills-network/dealer\\_evaluation\\_frontend.git](https://github.com/ibm-developer-skills-network/dealer_evaluation_frontend.git) in your /home/project directory.

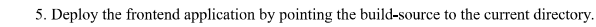
Take a screenshot of the successful git cloning and save it as git\_clone.png.

```
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.



```
port - 5001
```

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

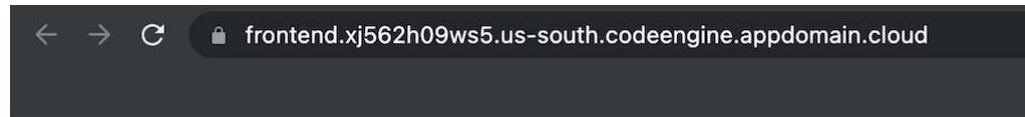
```

$ theia@theia:docker-lavanyas:/home/project/dealer_evaluation_frontend$ ibmcloud ce application create --name frontend --image us.icr.io/$SN_ICR_NAMESPACE/frontend --registry-secret icr-secret --port 5001 --build-source .
Creating application 'frontend'...
Packaging files to upload from source path './'...
Submitting build run 'us.icr.io/$SN_ICR_NAMESPACE/frontend-230110-080653852'...
Creating image 'us.icr.io/$SN_ICR_NAMESPACE/frontend:230110-1306-lcccc'...
Waiting for build run to complete...
Build run status: 'unknown'
Build run completed 'success' fully.
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 recorded.
Waiting for load balancer to be ready.
Run 'ibmcloud ce application get -n frontend' to check the application status.
OK
https://frontend.xj56th09ws5.us-south.codeengine.appdomain.cloud

```

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.

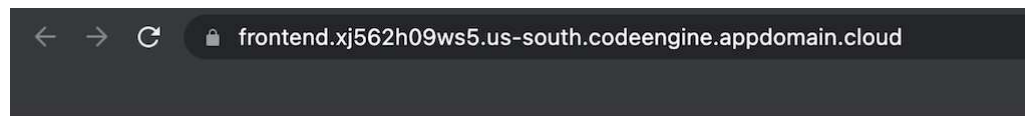


## Products price comparison

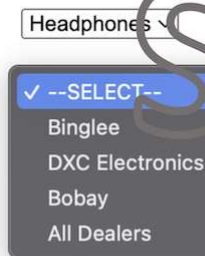


8. After selecting the product from the dropdown, the dealers that supply the product should be displayed.

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`.



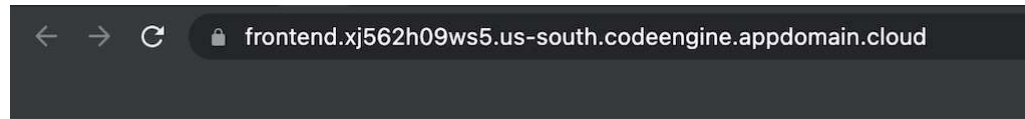
## Products price comparison



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

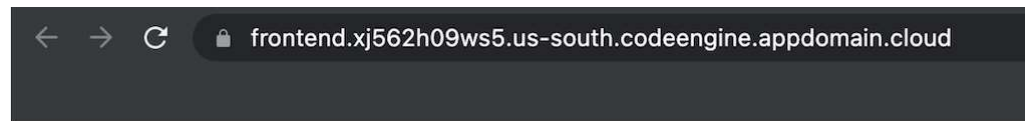
Headphones

Binglee

Headphones costs \$30 at Binglee

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

Binglee \$30

DXC Electronics \$20

Bobay \$20

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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