Part B: Deploy an Application to Cloud Foundry

Estimated time needed: 30 minutes

Lab Overview

In this hands-on lab, you will create a Node.js application on IBM Cloud using the Cloud Foundry sample application.

Objectives

After completing this lab, you will be able to:

1. Create an Node.js application on IBM Cloud using the Cloud Foundry sample application.

Lab Instructions

This lab is broken up into the following tasks:

1: Obtaining your randomly generated key

The exercises require that you create several objects, in which each should have unique names. You use an online tool to generate a random key to ensure that the names of your objects are unique:

1. Go to https://www.uuidgenerator.net/. You see a string of 36 letters, numbers, and hyphens. [Figure 1-1] shows the Universally Unique Identifier (UUID). Make note of the first three characters. This is your randomly generated key.
2. The first three characters in the UUID are used in the naming convention for this exercise. For example, if the UUID returned by the UUID generator was 38a01ffb-87e0-4abe-b726-edd09b7f1c31, then the key you should use in the object name is `38a`. Every time that you see xxx as part of the object name, replace it with your key.

Figure 1-1 Online UUID generator

2: Creating an application

The IBM Cloud catalog lists components and services that help you build your application. In this part, you create an instance of IBM Cloud Foundry, then IBM Cloud application with the IBM software development kit (SDK) for the Node.js runtime.

Note IBM Cloud Lite accounts are limited to 256MB total memory for all applications. If you are using an IBM Cloud Lite account and you have existing applications, you must stop them running or delete them before attempting to create the new application which requires 256MB of memory.

1. Login to IBM Cloud with the account you created in Lab 2: Getting Started with IBM Cloud.
2. Create an instance of the IBM Cloud Foundry:
    1. On the IBM Cloud Dashboard, click **Create resource** on the right, as shown in [Figure 1-2].

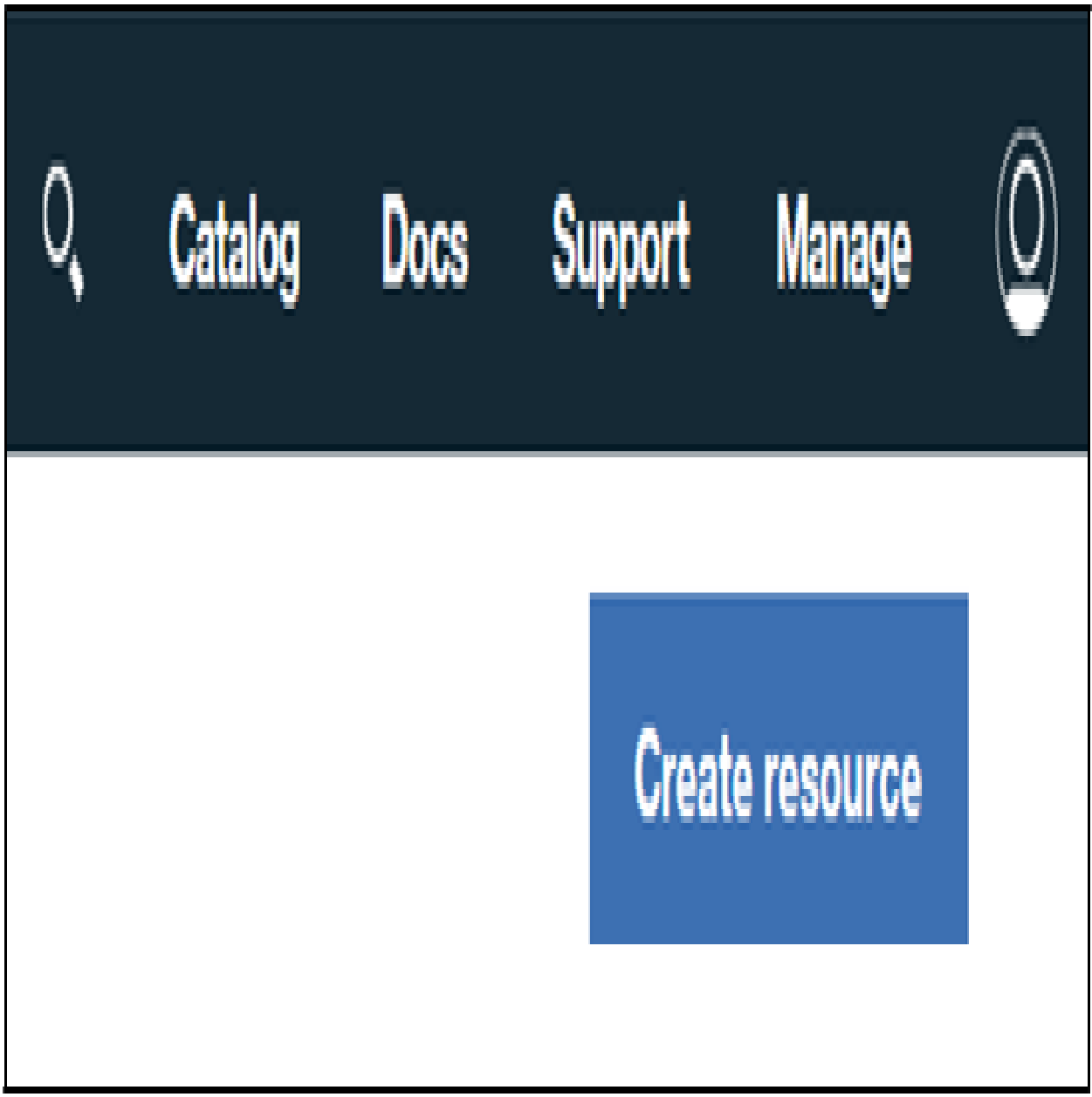

Figure 1-2 Create Resource button

2. You can now see the entire catalog. In the Search field, type "Cloud Foundry".
3. Select **Cloud Foundry**.
4. On the Cloud Foundry page, scroll down to **Application runtimes**, and then click **SDK for Node.js**, as shown in [Figure 1-3].

Figure 1-3 SDK for Node.js tile

3. **Select a region:**
    1. On the Create a Cloud Foundry Sample App page, note that the default region is chosen according to your location. In this course, you should be using the Dallas (US South) region. Verify that the region selected is Dallas, as shown in [Figure 1-4].

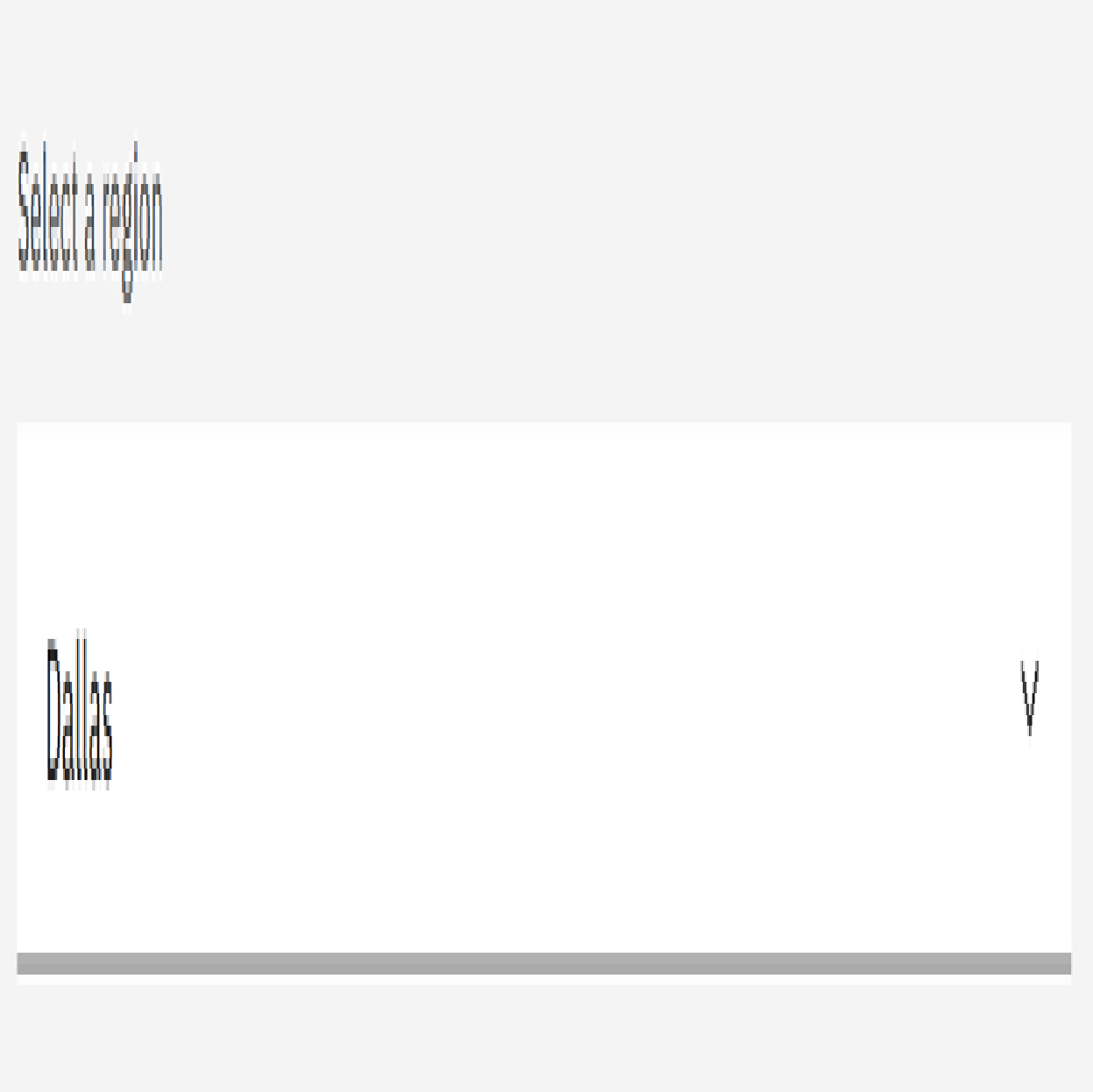

Figure 1-4 Region for app

4. **Select a pricing plan:**
    1. If you do *not* have a Lite account, skip this step. For Lite accounts, Pricing Plans show that 64MB of memory is allocated to your app. For this exercise, select the maximum allocation of **256 MB,** as shown in [Figure 1-5].

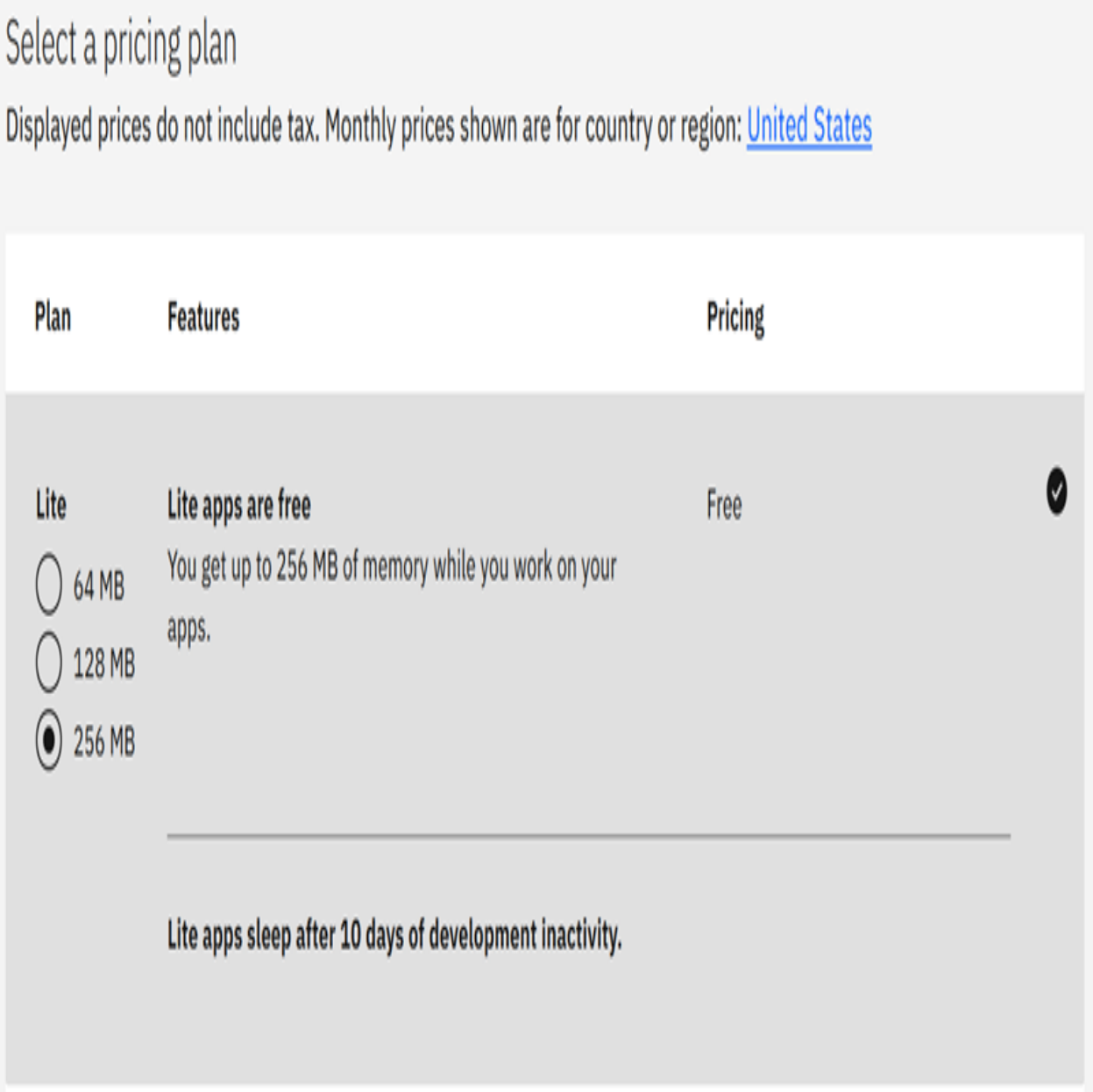

Figure 1-5 Pricing Plans

5. Examine the application details for the SDK for Node.js runtime environment:
    1. Enter the app name. In the **App name** field, enter movies-reviews-database-xxx. Replace xxx with the first three characters of your randomly generated key, as shown in [Figure 1-6]. For example, if the randomly generated key is 38a, the app name is movies-reviews-database-38a.
    2. The **Host name** is set by default to the app name, as shown in [Figure 1-6].

3. The **Domain** is chosen according to your location. For example, as in [Figure 1-6], the **Domain** is set to the US South's domain: **us-south.cf.appdomain.cloud**.
4. The **organization** is set by default to the email you logged in with, as shown in [Figure 1-6].
5. The **space** is set by default to dev, as shown in [Figure 1-6].

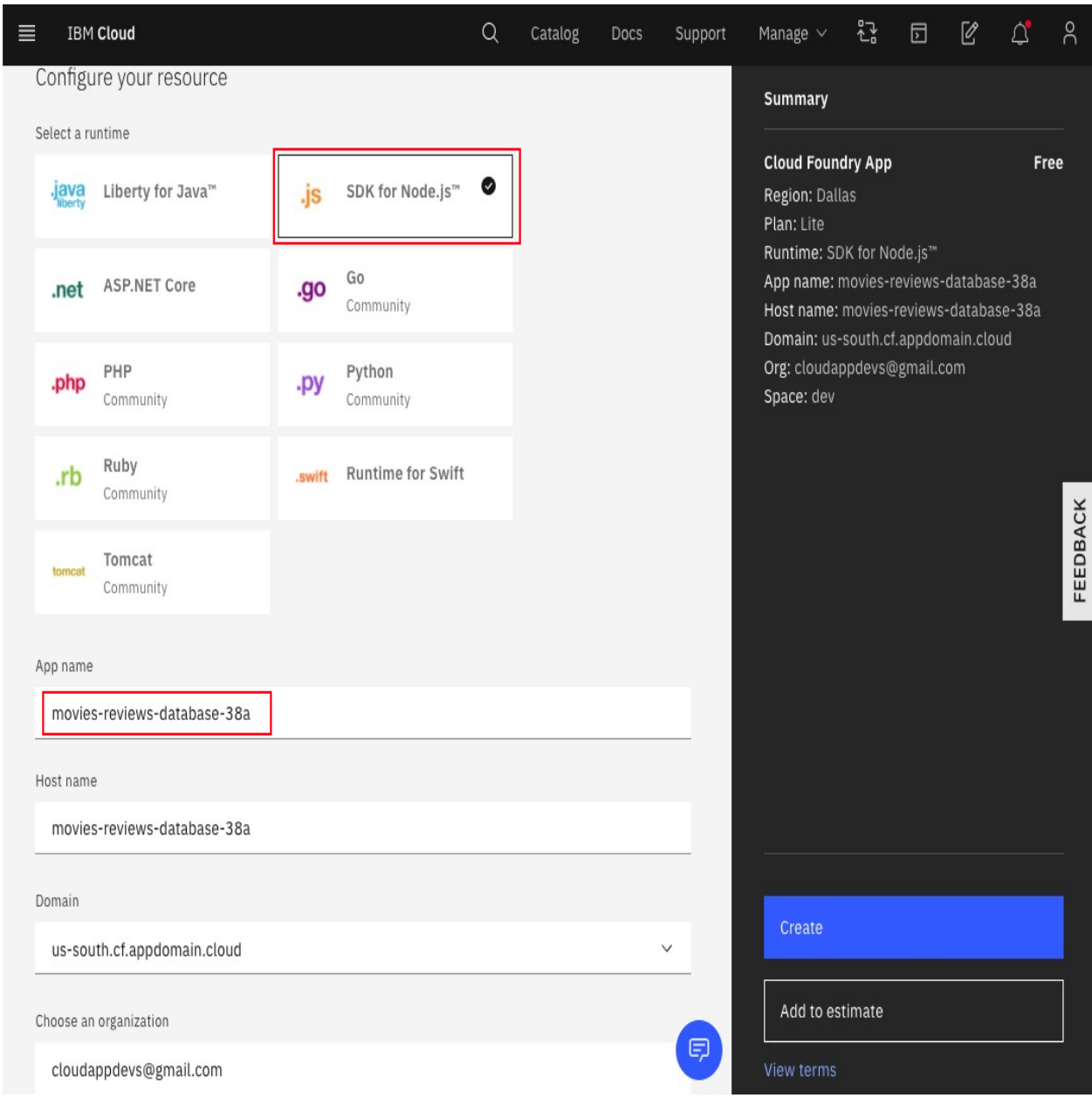

Figure 1-6 Application details

6. Click **Create**.

IBM Cloud proceeds to deploy your application. Your application stages and deploys in a few minutes.

Wait until the application finishes staging and it is running in IBM Cloud. When the application status changes from Starting to **Running**, as shown in [Figure 1-7], you can proceed to the next step.

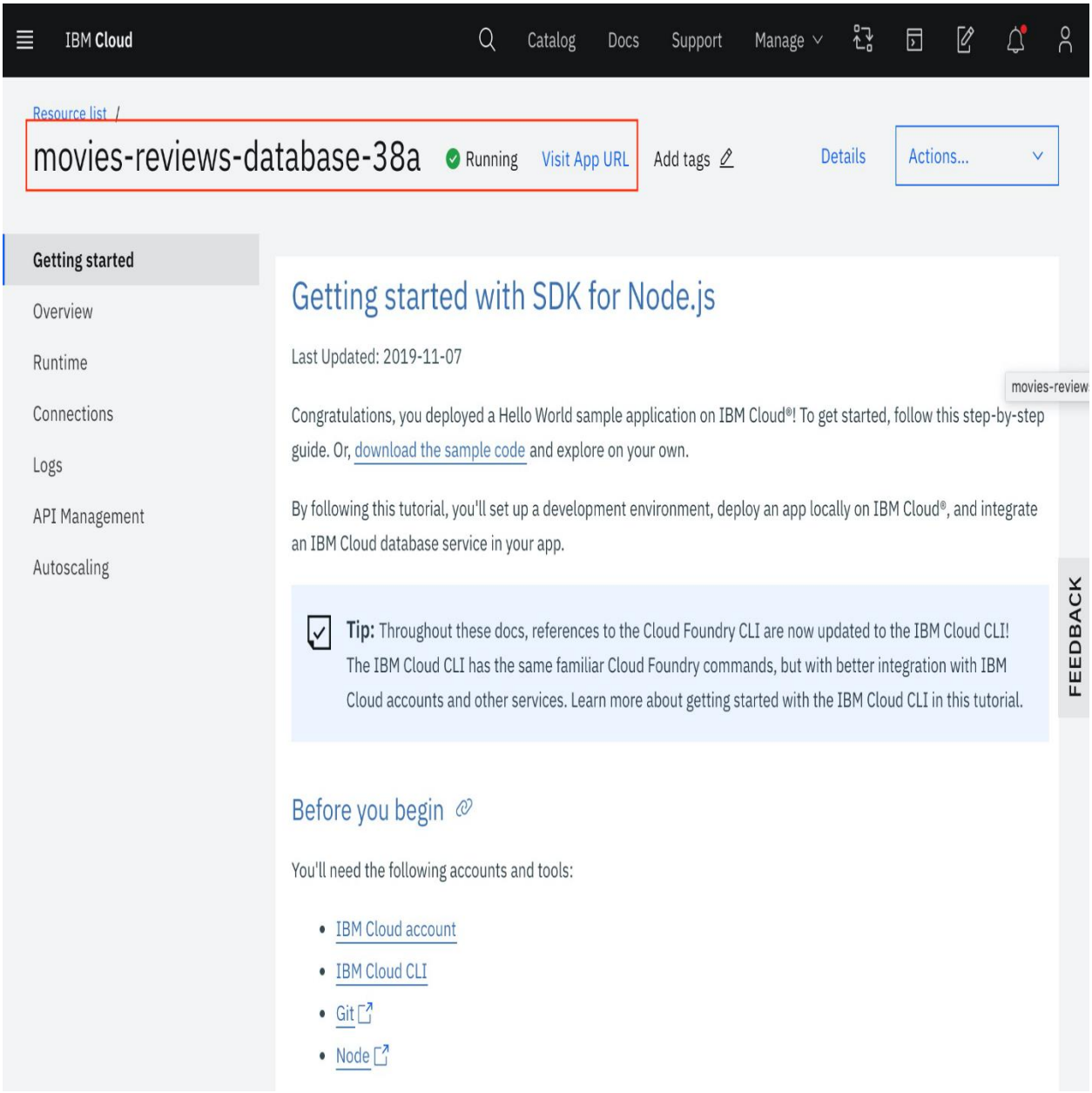

Figure 1-7 Appication is running

7. Click **Visit App URL** which will open a new browser tab with the url for your app: https://movies-reviews-database-xxx.us-

south.cf.appdomain.cloud where *xxx* is your randomly generated key. For example, if the randomly generated key is 38a, then the link is

https://movies-reviews-database-38a.us-south.cf.appdomain.cloud

8. Confirm that the sample application appears, as shown in [Figure 1-8].

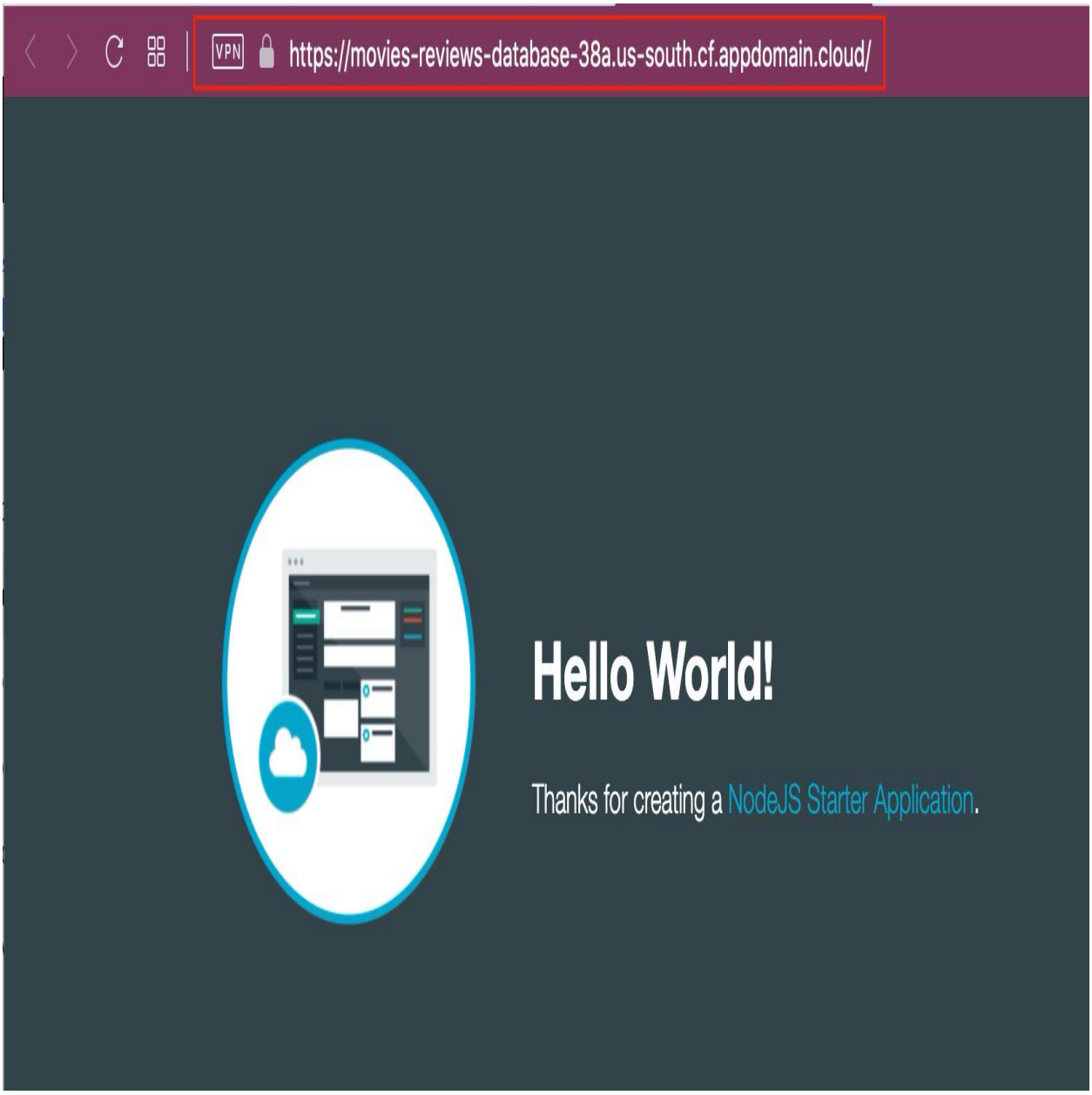

Figure 1-8 Starter application displayed in browser

9. Close the browser page for Hello World.

10. Go back to IBM Cloud and click on `Resource List` using the menu on the top left as shown here.

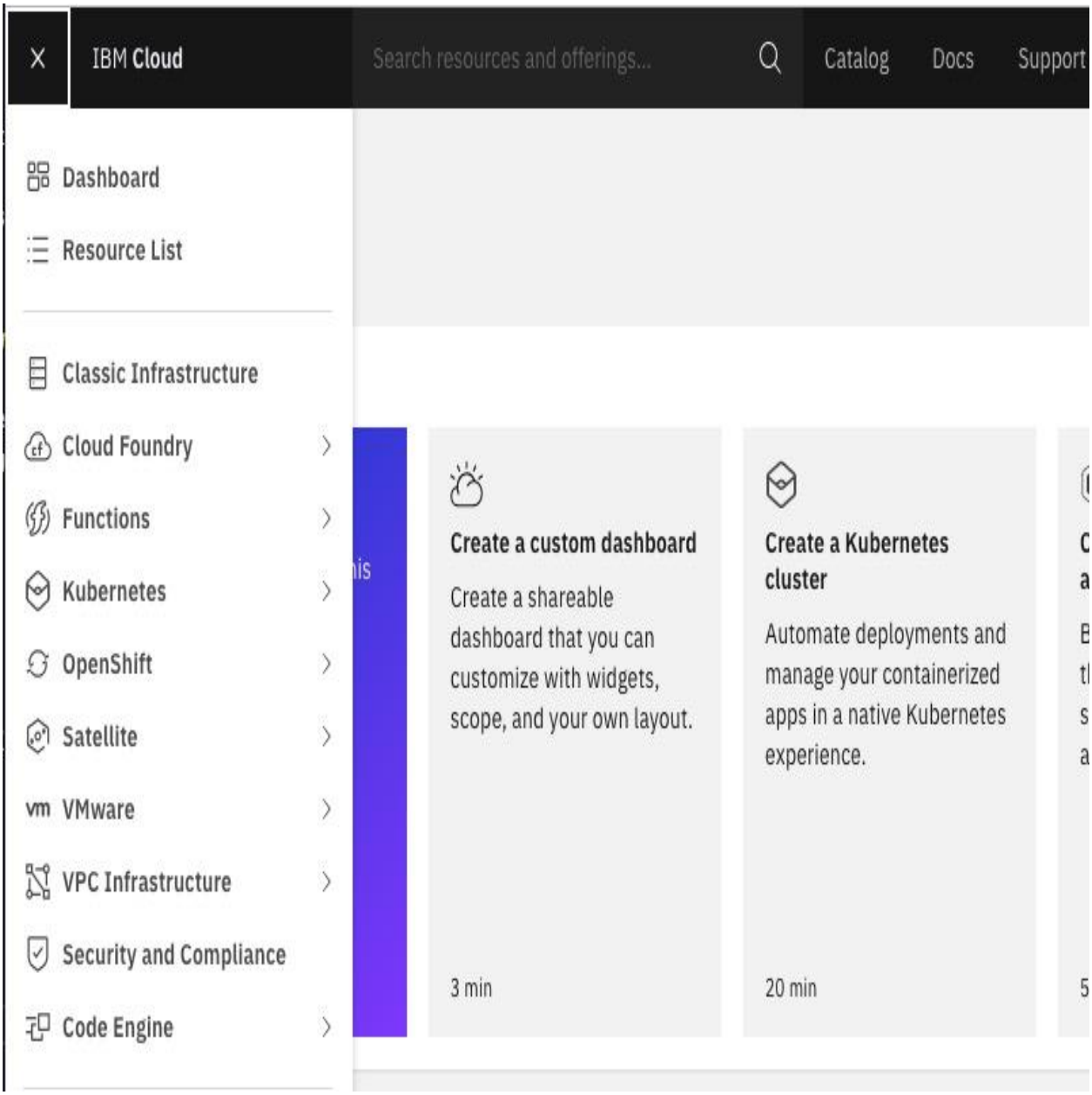

Figure 1-9 Open IBM Resources page

You should see your application listed under `Cloud Foundry apps`. Take a screenshot of this page and save it as `resourcepage-application.jpg`. You will be asked to upload it for the final project grading. The screenshot must show the name of the application as shown here:

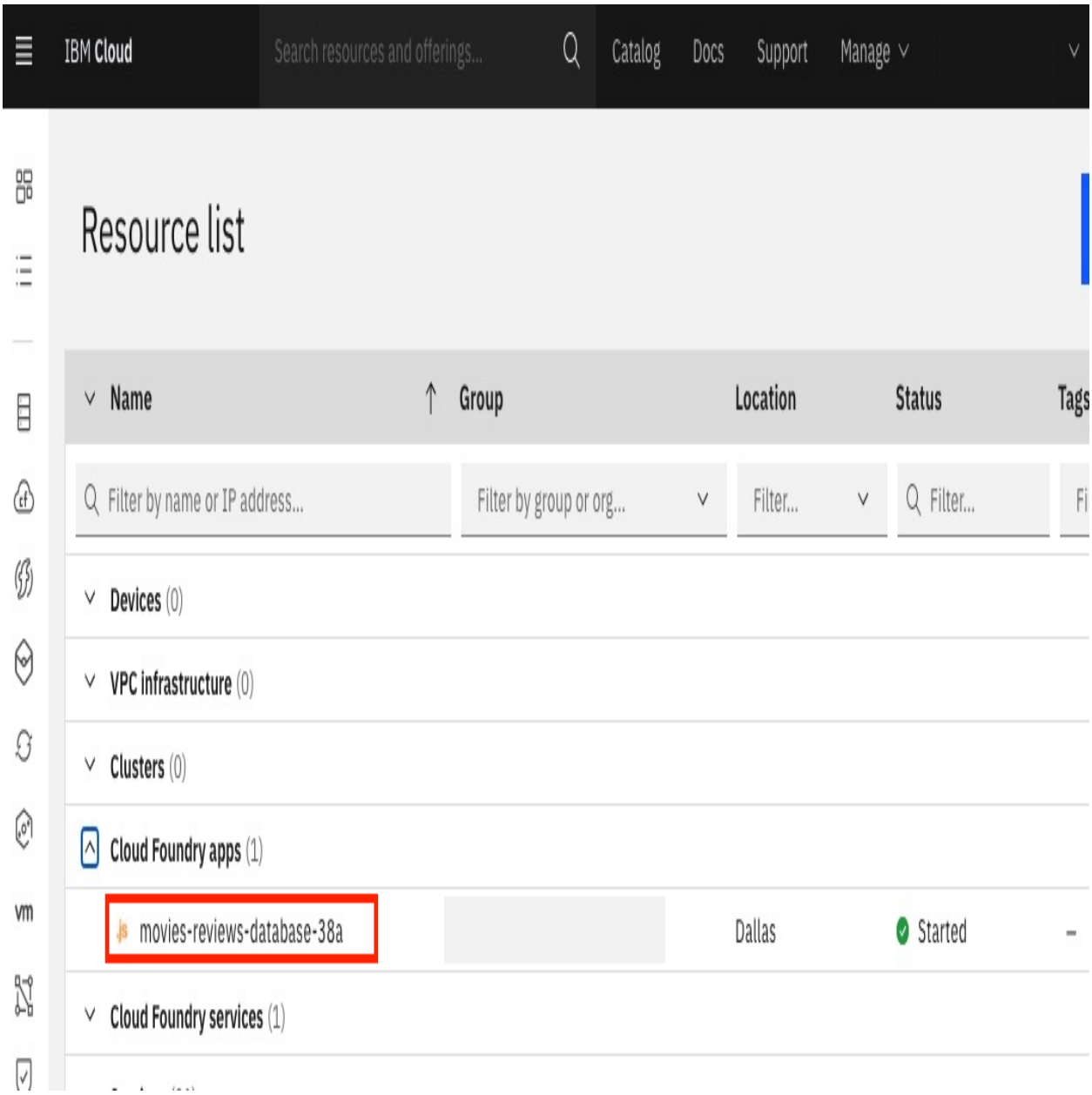

Figure 1-9 Application listed on Resources page

Congratulations! We hope you've deployed an application to Cloud Foundry on IBM Cloud.