Experiment No. 4

Title: Working in Codenvy to demonstrate Provisioning and Scaling of a website.

Objective: To learn Codenvy Platform as a Service (using Redhat Openshift Developer sandbox because now this service is Aquired by redhat openshift)

Tools used:

Internet, Redhat Openshift Developer sandbox, Github

Prerequisite:

Understanding of Platform as service model of cloud computing.

Theory: Codenvy, now acquired by Red Hat and integrated into the Red Hat OpenShift platform, is a cloud-based integrated development environment (IDE) that provides developers with the necessary tools to code, build, test, and run applications. The platform is designed to simplify the development process by eliminating the need to install software and manage servers, thereby allowing developers to focus solely on writing code.

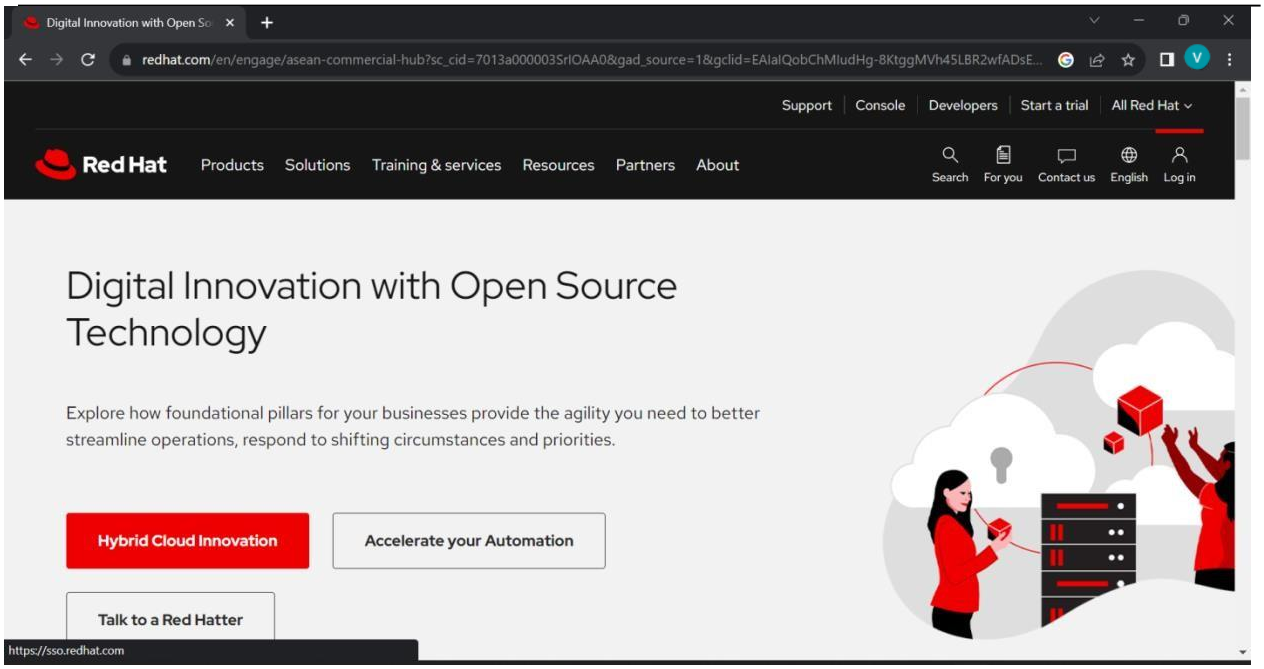
In this experiment, we are using Codenvy to demonstrate the provisioning and scaling of a website. Provisioning refers to the process of setting up IT infrastructure. It can also refer to the steps required to manage access to data and resources, and make them available to users and systems.

Scaling, on the other hand, is the ability of the system to handle and adapt to an increasing amount of work. In the context of a website, this could mean the ability to serve more users concurrently, handle more data, or run more complex applications.

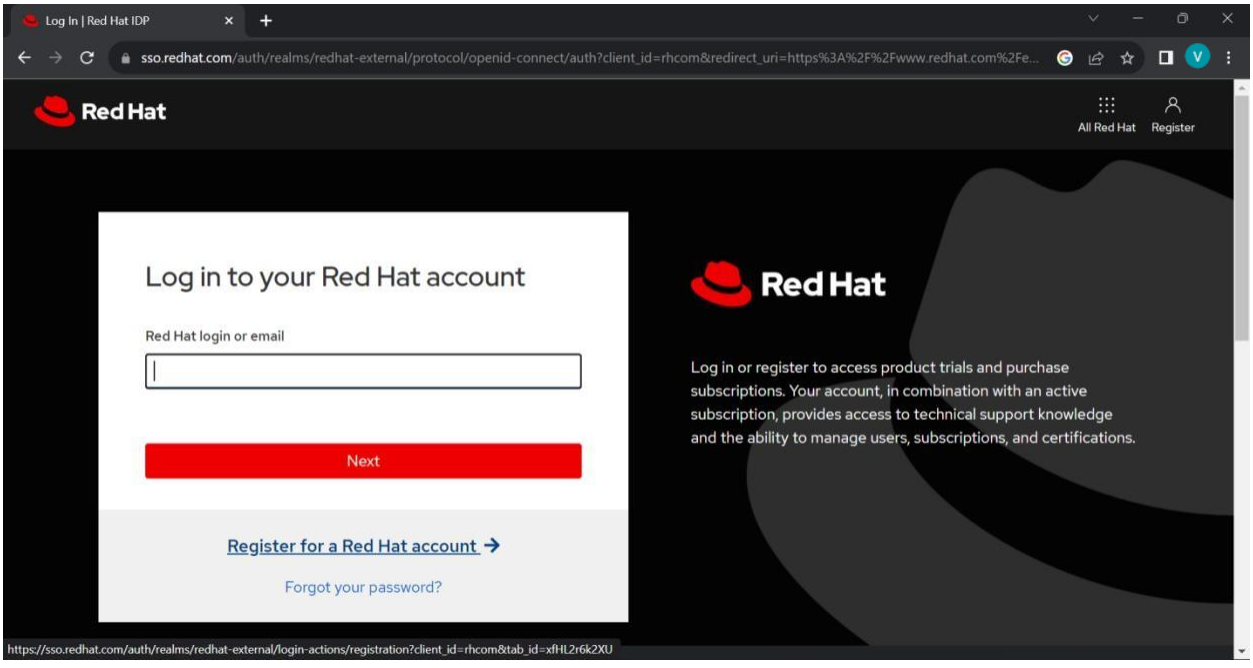
Red Hat OpenShift is a family of containerization software products developed by Red Hat. Its flagship product is the OpenShift Container Platform—an on-premises platform as a service built around Docker containers orchestrated and managed by Kubernetes on a foundation of Red Hat Enterprise Linux.

Steps to perform the experiment:

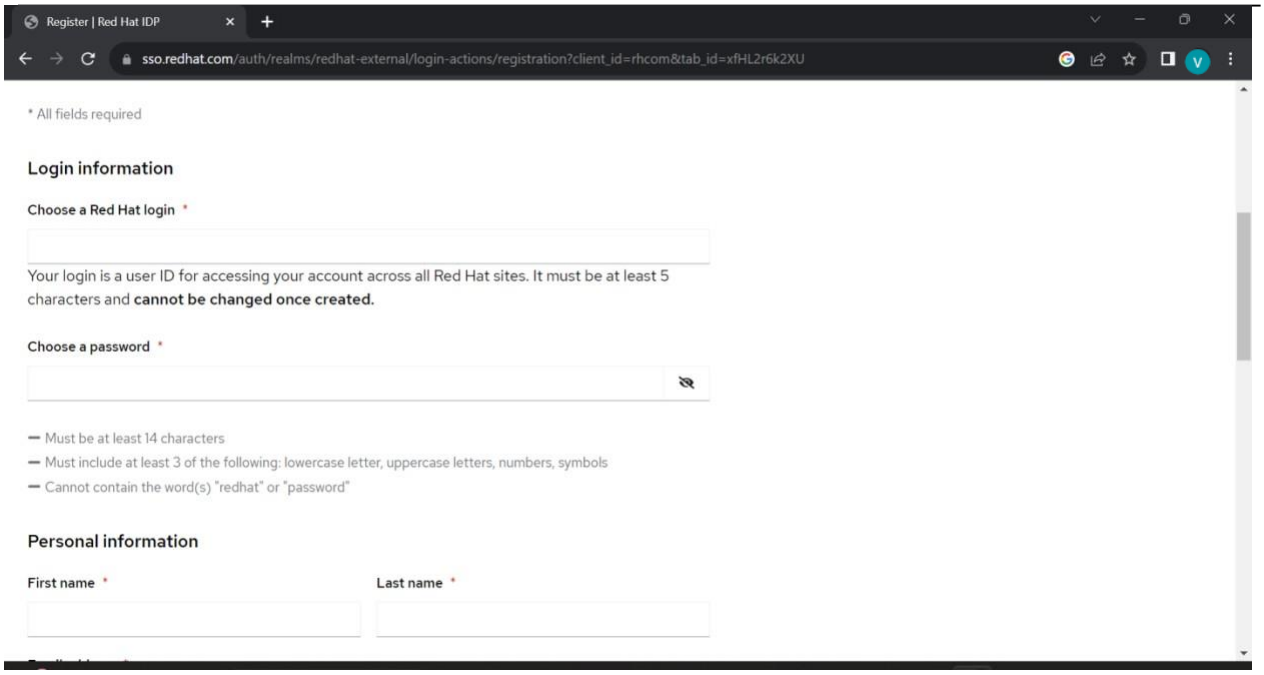
Step 1: Creating Account For Red hat Account, click on login.

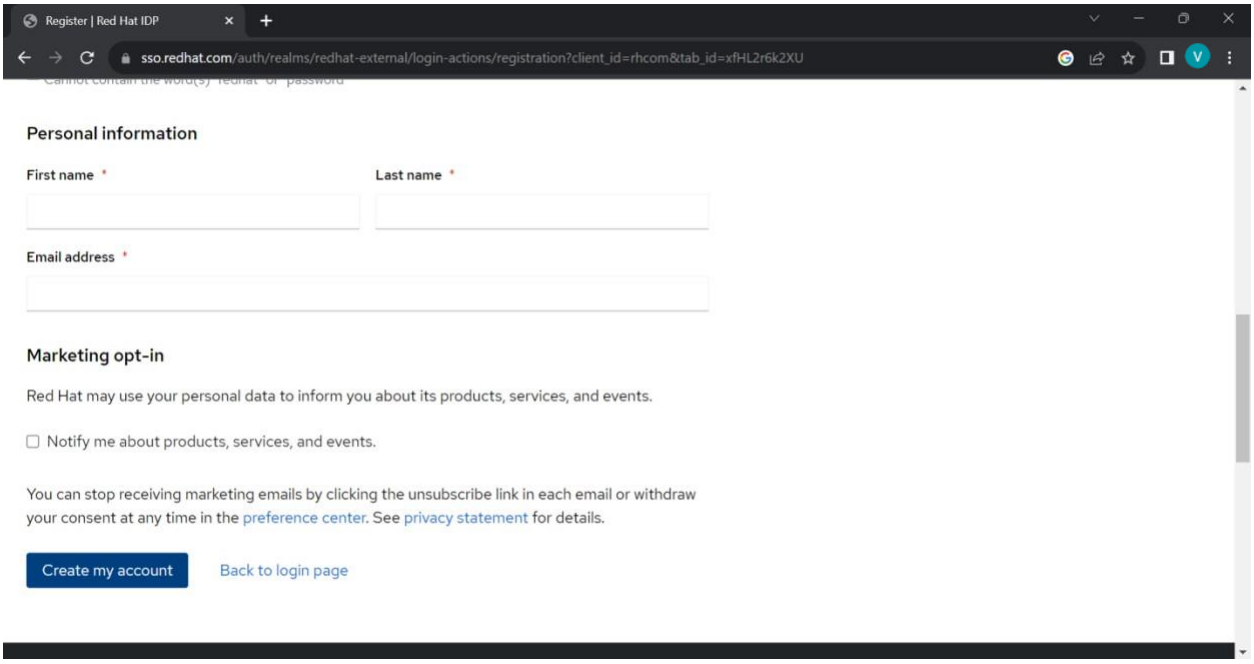


Step 2: Click on register for a Red Hat account.

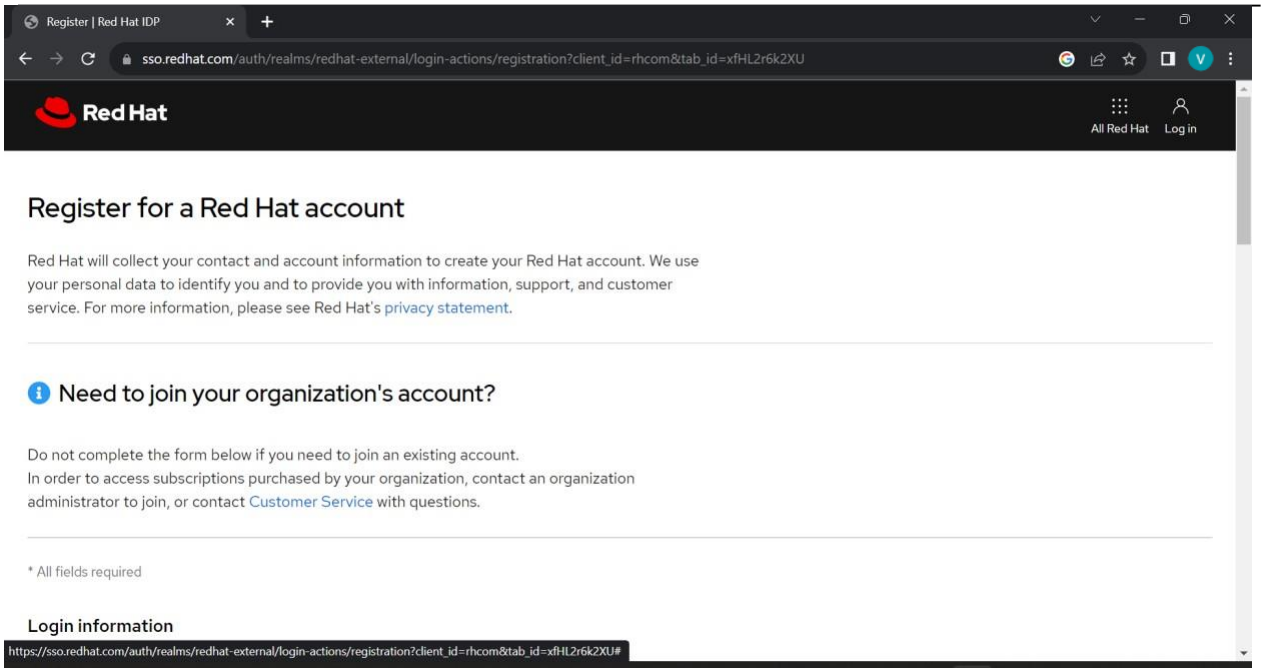


Step 3: Fill details and click and create my account.

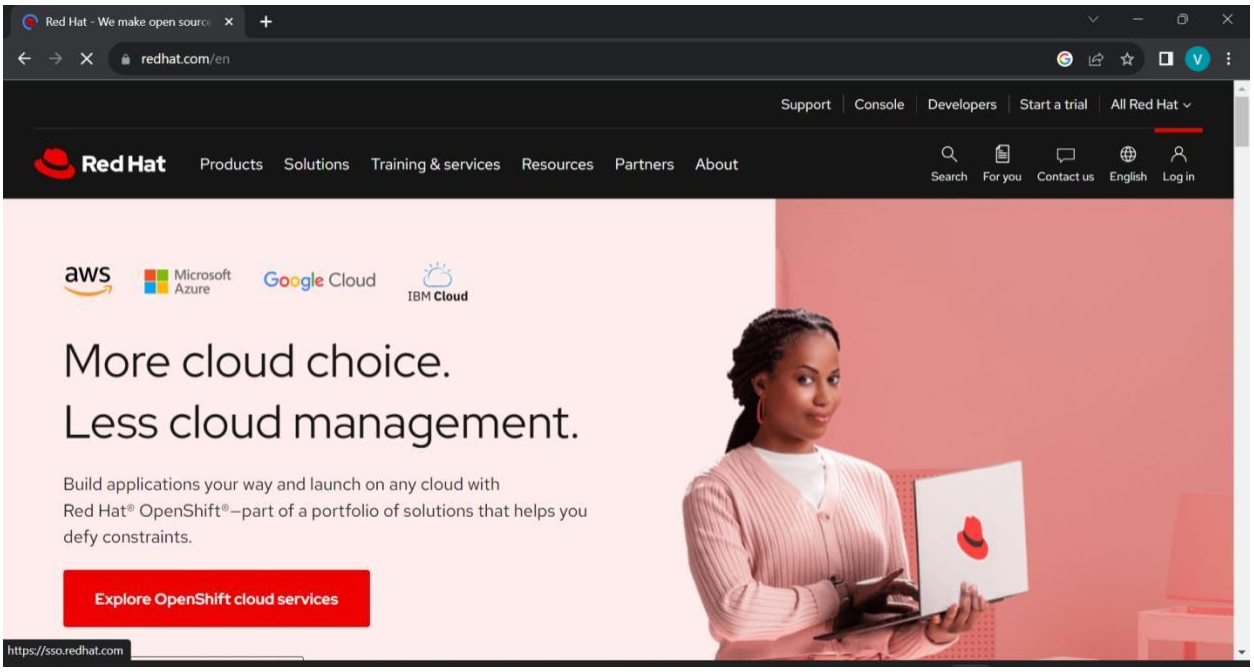




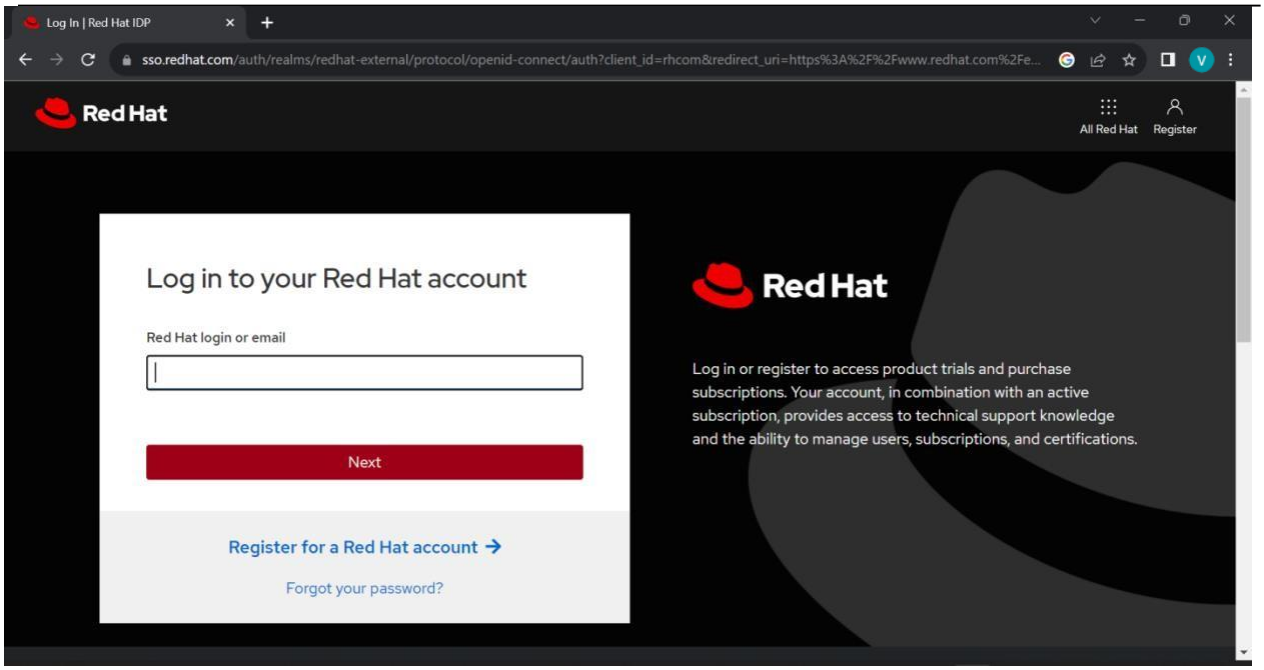
Step 4: Click on Red Hat icon.

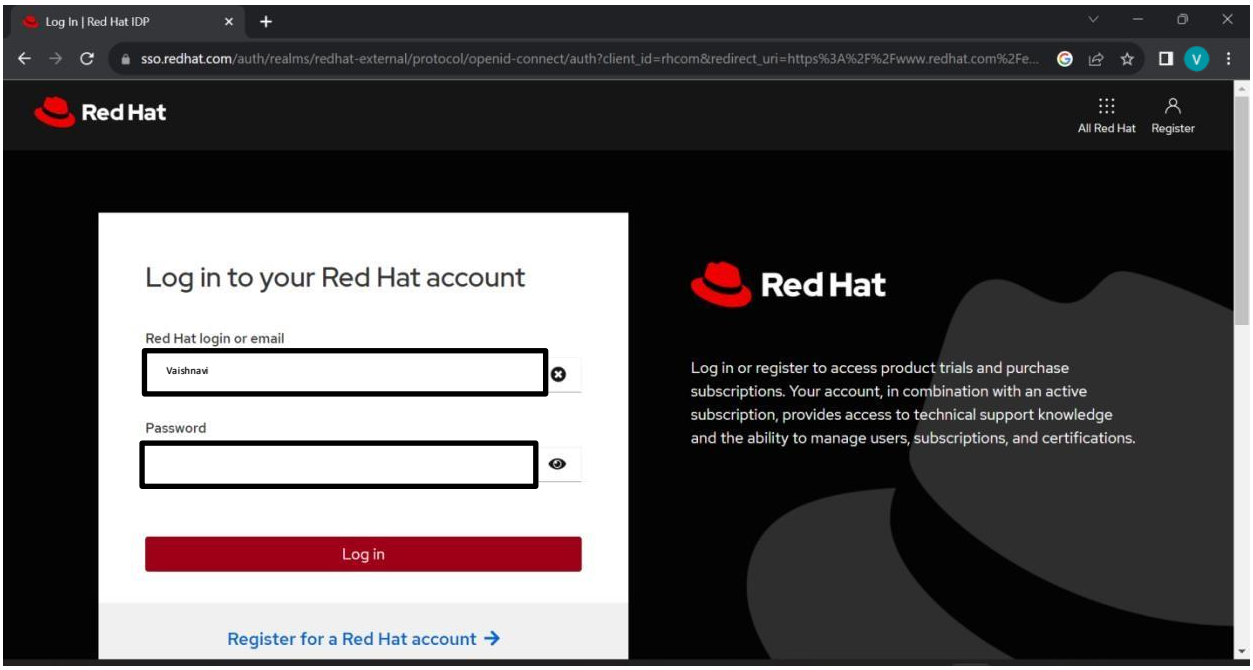


Step 5: Click on login.

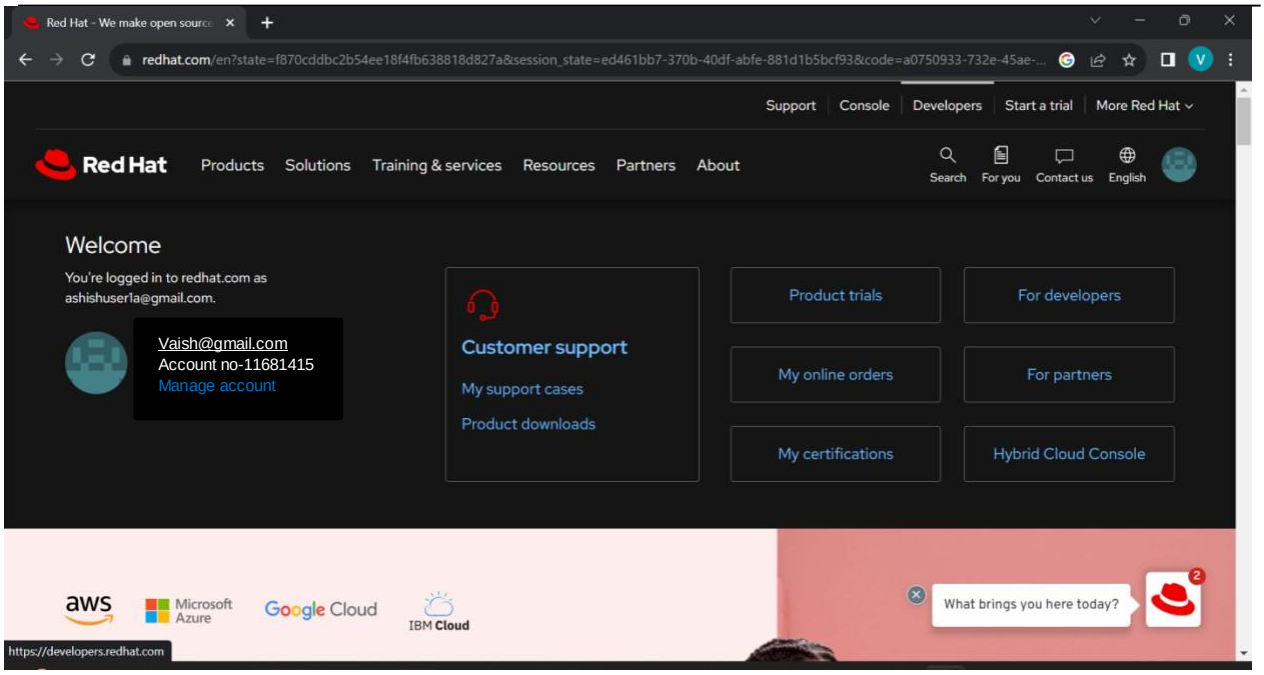


Step 6: Write email and then click on next and then write password and then click on Log in.

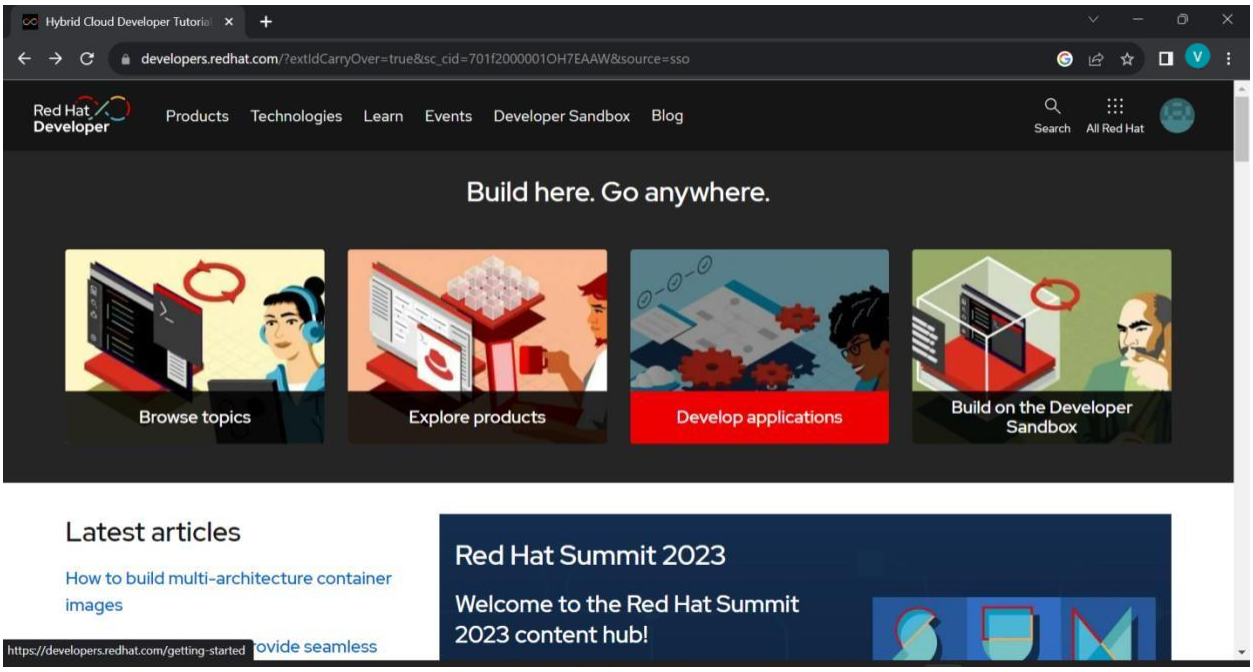




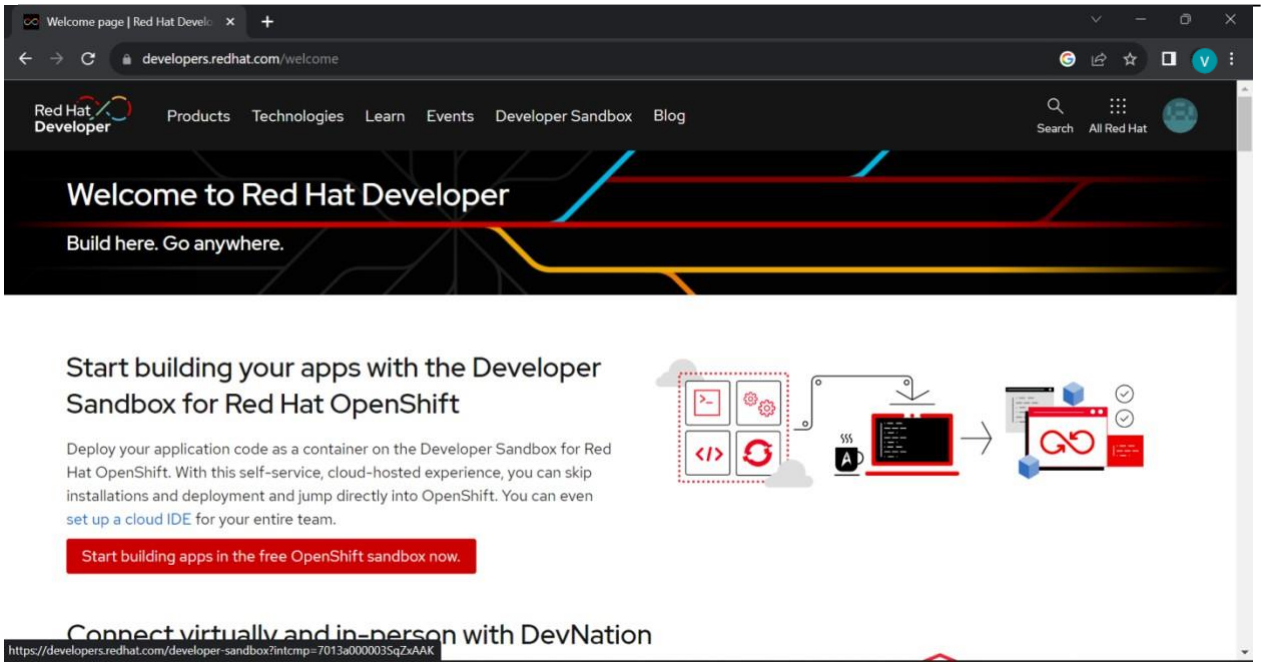
Step 7: click on developer.



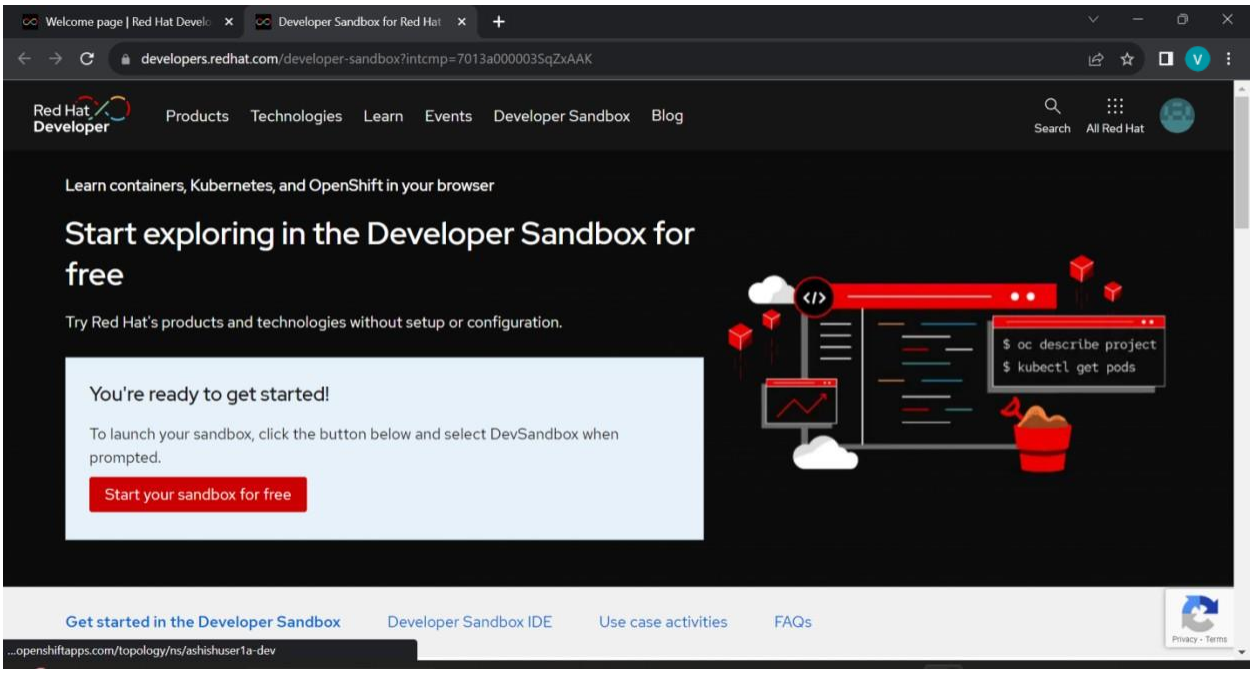
Step 8: click on develop application.



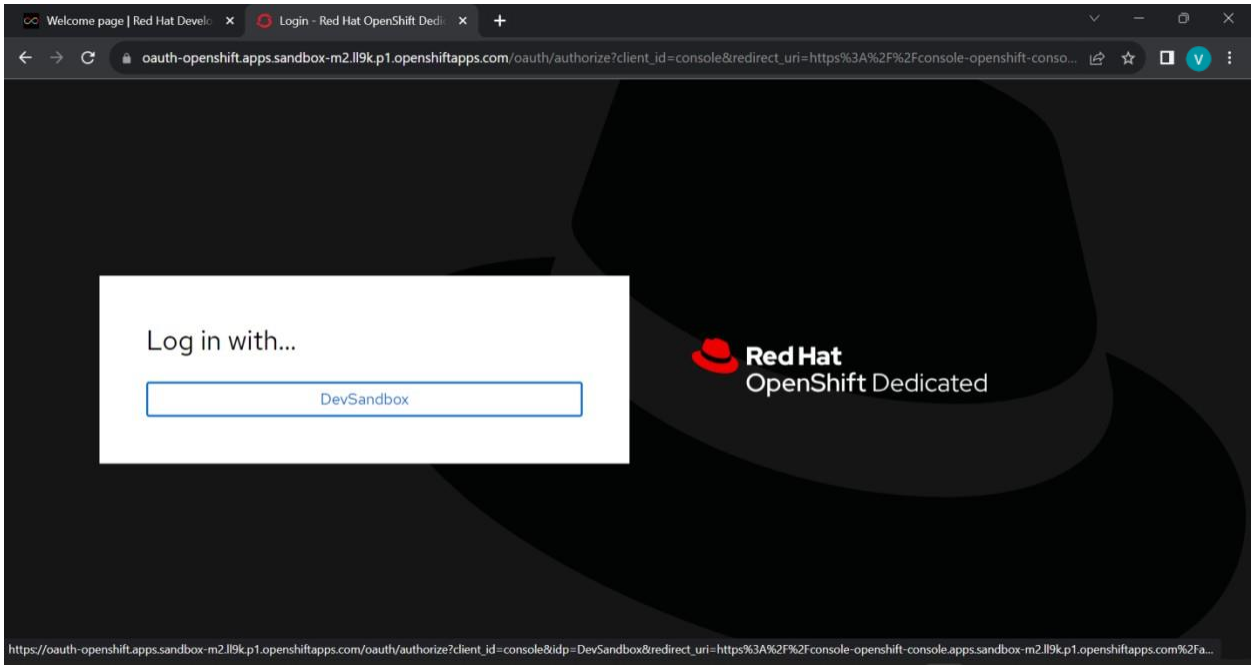
Step 9: click on start building apps in the free OpenShift sandbox now.



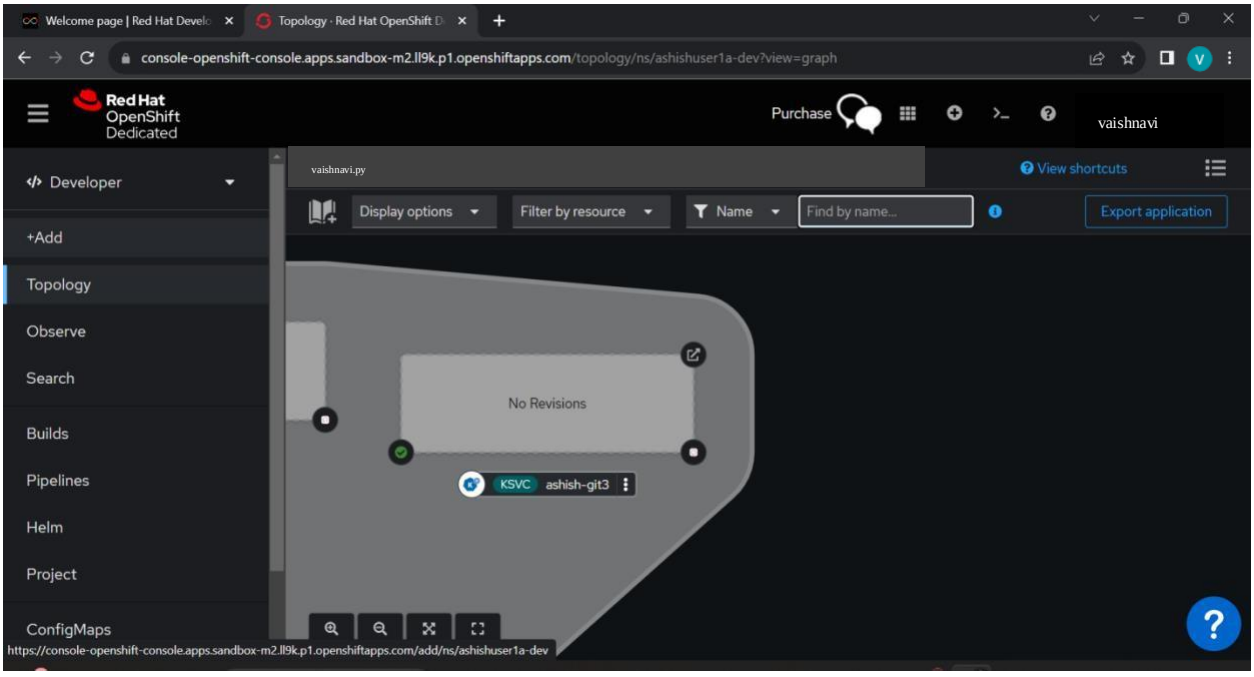
Step 10: click on start your sandbox for free.



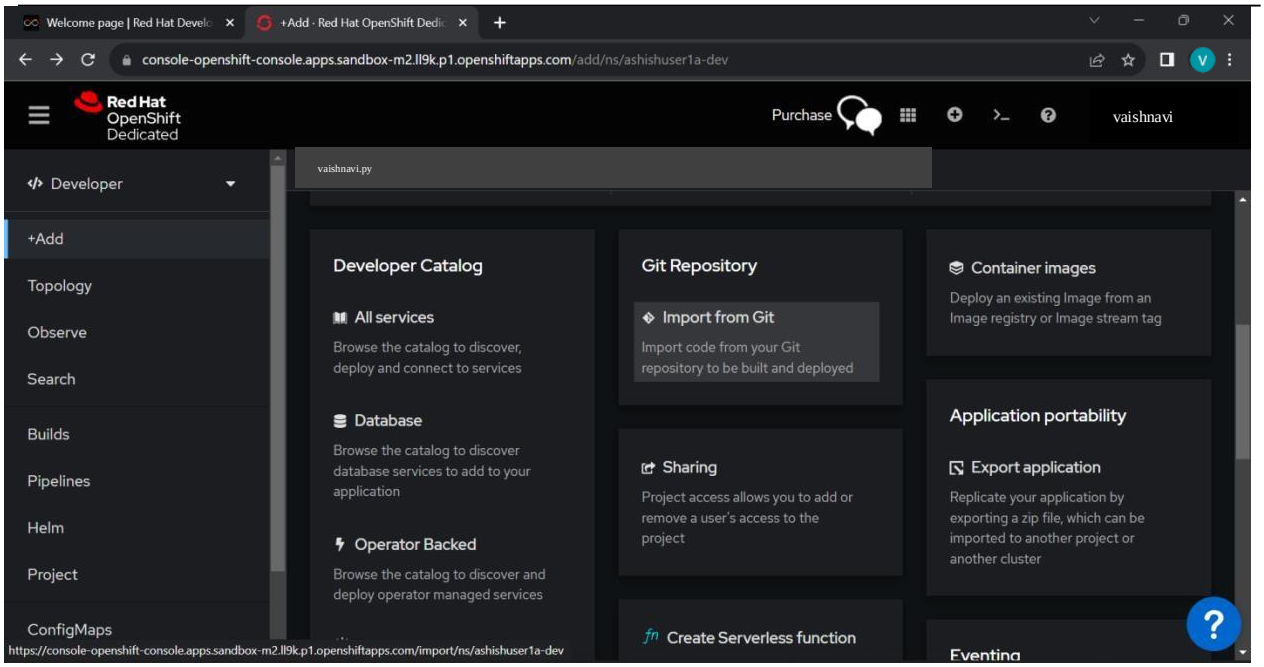
Step 11: click on DevSandbox.



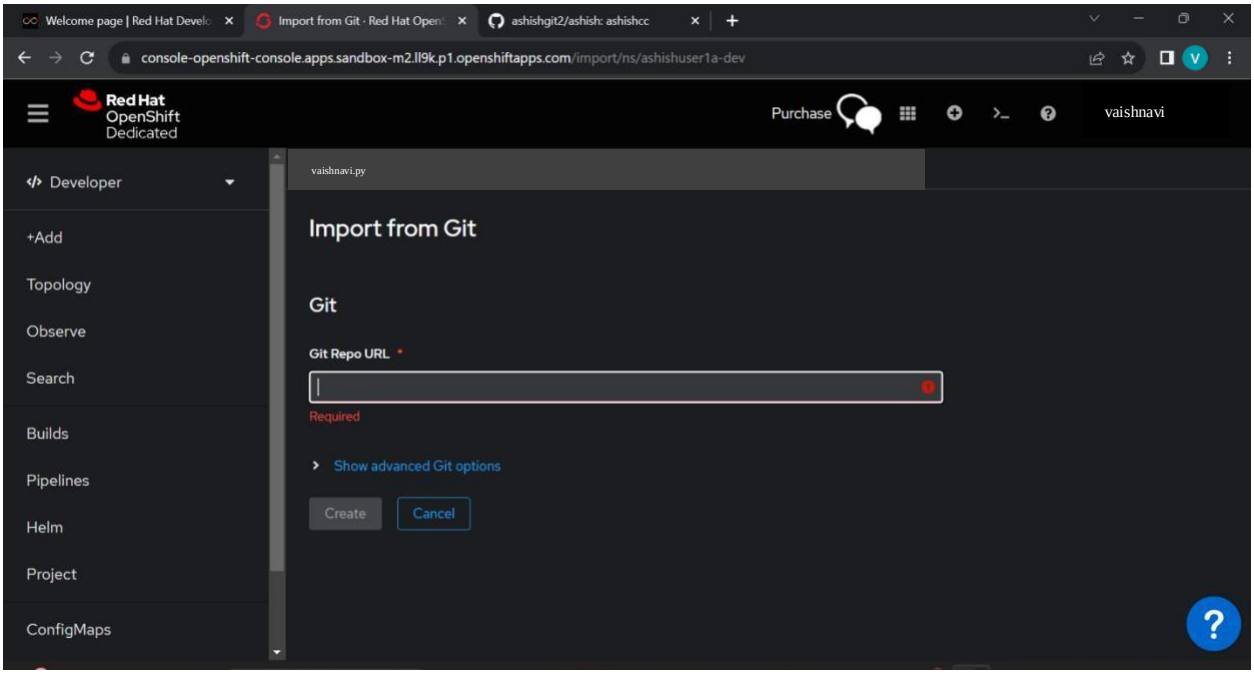
Step 12: click on +add.



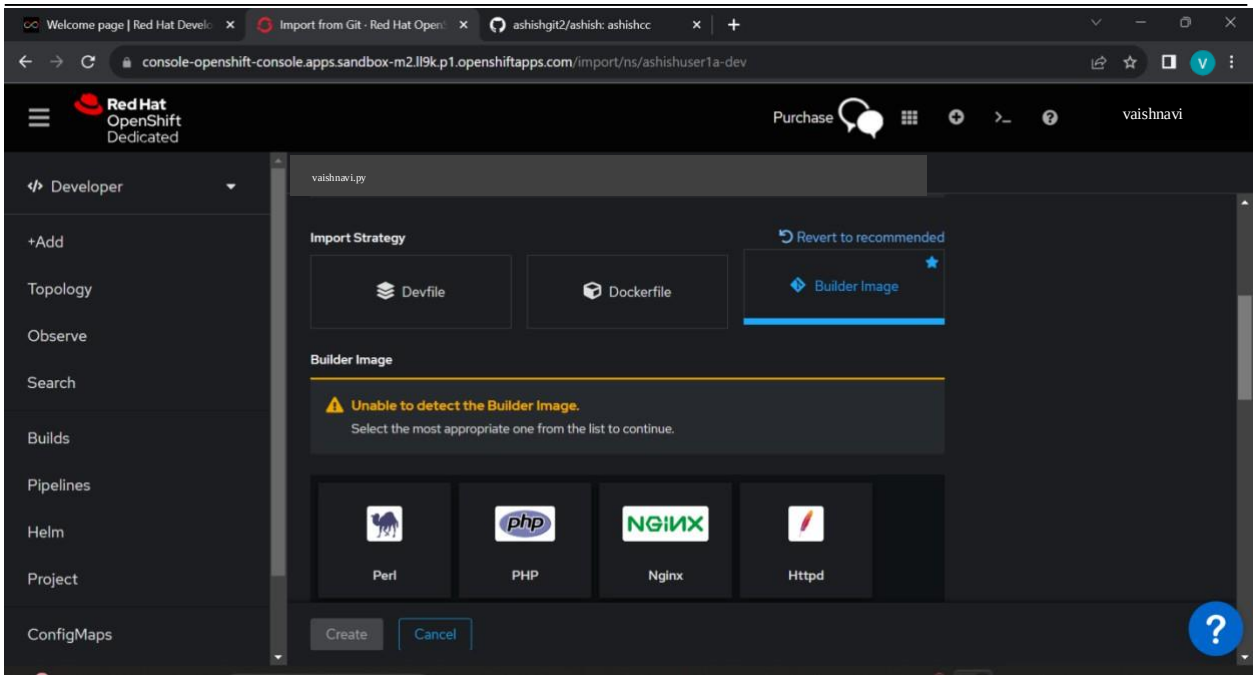
Step 13: click on import from Git.



Step 14: type Git Repo UR and click on crate.



Step 15: Select builder image and fill details.


Welcome page | Red Hat Develo
Import from Git · Red Hat Open
ashishgit2/ashish: ashishcc
console-openshift-console.apps.sandbox-m2.ll9k.p1.openshiftapps.com/import/ns/ashishuser1a-dev
Red Hat OpenShift Dedicated
Purchase
vaishnavi
Developer
+Add
Topology
Observe
Search
Builds
Pipelines
Helm
Project
ConfigMaps
vaishnavi.py
Import Strategy
Revert to recommended
Devfile
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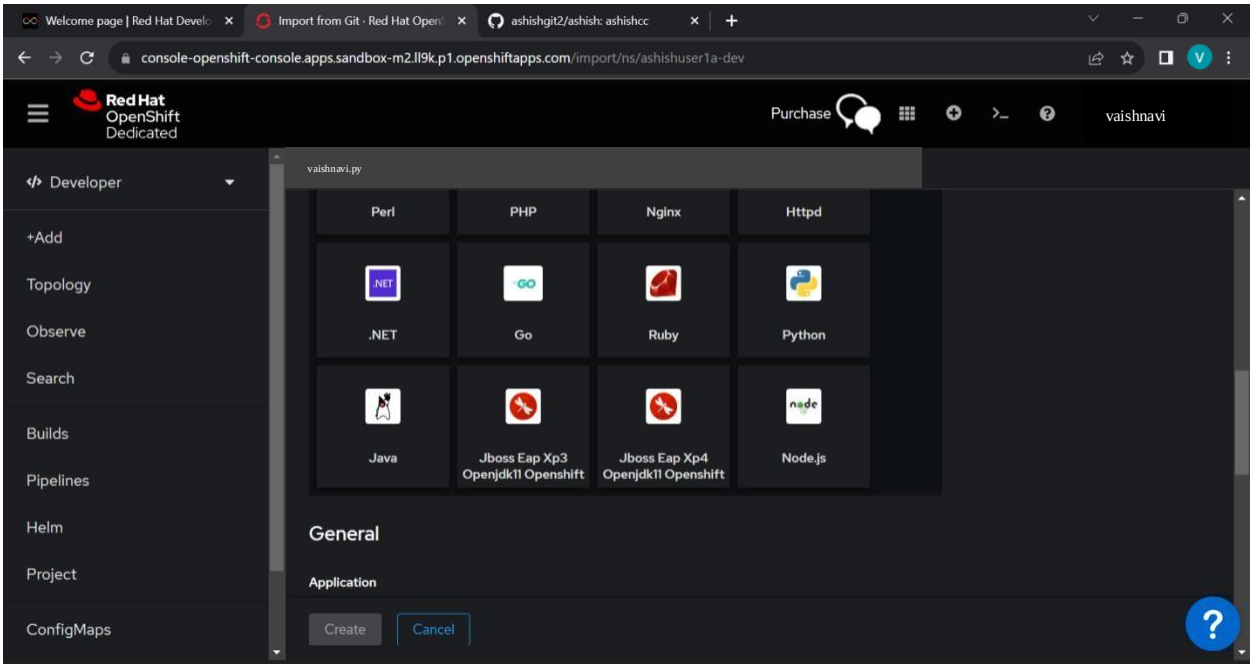
Builder Image
Builder Image
Unable to detect the Builder Image.
Select the most appropriate one from the list to continue.
Perl
PHP
Nginx
Httpd
Create
Cancel


Welcome page | Red Hat Develo
Import from Git · Red Hat Open
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console-openshift-console.apps.sandbox-m2.ll9k.p1.openshiftapps.com/import/ns/ashishuser1a-dev
Red Hat OpenShift Dedicated
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Nginx
Httpd
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Jboss Eap Xp4 Openjdk11 Openshift
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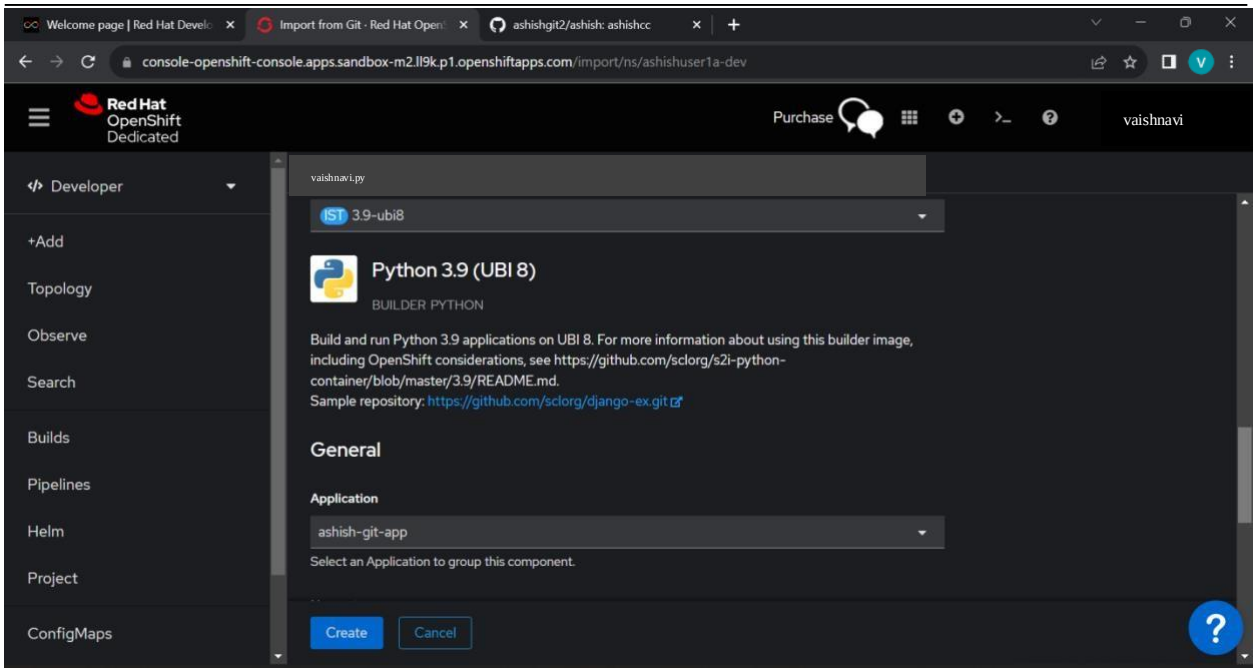
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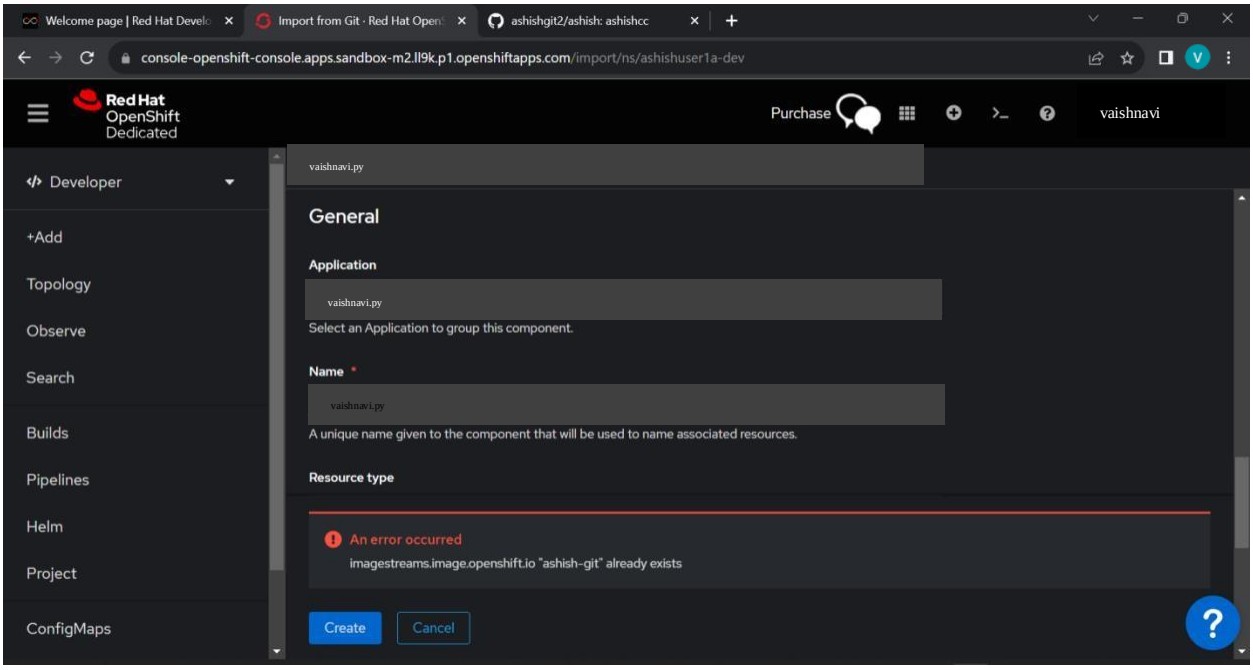
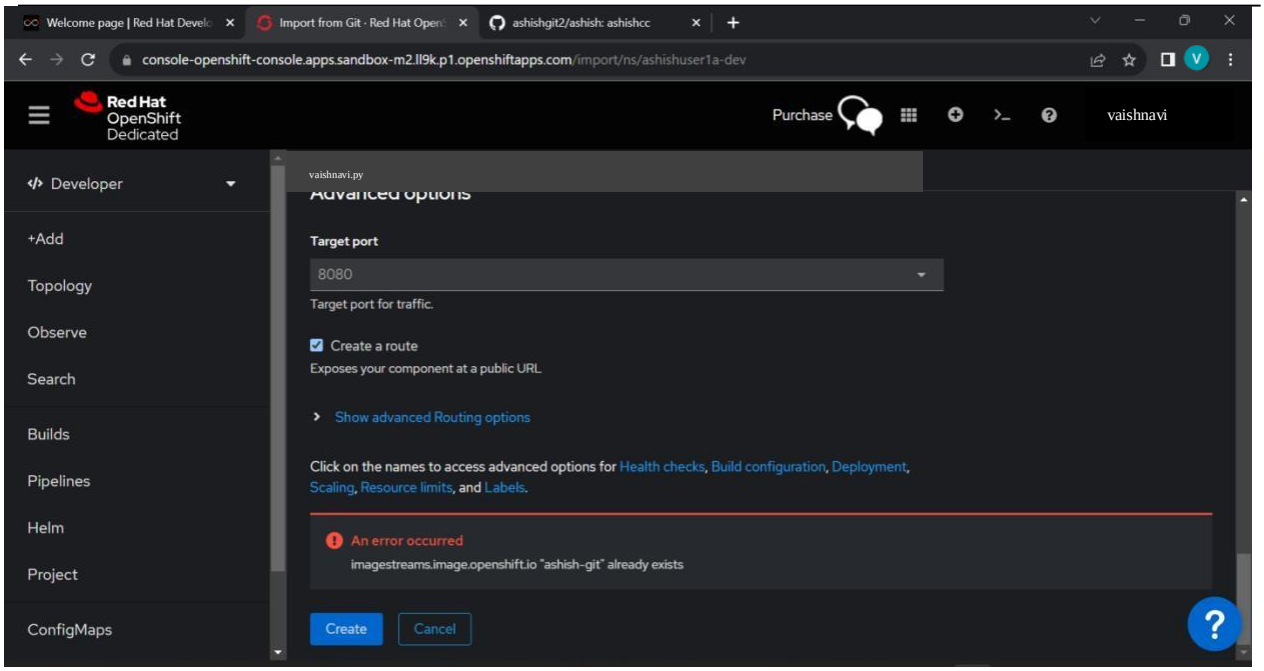
Import from Git · Red Hat Open
ashishgit2/ashish: ashishcc
console-openshift-console.apps.sandbox-m2.ll9k.p1.openshiftapps.com/import/ns/ashishuser1a-dev
Red Hat OpenShift Dedicated
Purchase
vaishnavi
Developer
+Add
Topology
Observe
Search
Builds
Pipelines
Helm
Project
ConfigMaps
vaishnavi.py
IST 3.9-ubi8
Python 3.9 (UBI 8)
BUILDER PYTHON
Build and run Python 3.9 applications on UBI 8. For more information about using this builder image, including OpenShift considerations, see https://github.com/sclorg/s2i-python-container/blob/master/3.9/README.md.
Sample repository: https://github.com/sclorg/django-ex.git
General
Application
ashish-git-app
Select an Application to group this component.
Create
Cancel


Welcome page | Red Hat Develo
Import from Git · Red Hat Open
ashishgit2/ashish: ashishcc
console-openshift-console.apps.sandbox-m2.ll9k.p1.openshiftapps.com/import/ns/ashishuser1a-dev
Red Hat OpenShift Dedicated
Purchase
vaishnavi
Developer
+Add
Topology
Observe
Search
Builds
Pipelines
Helm
Project
ConfigMaps
vaishnavi.py
General
Application
vaishnavi.py
Select an Application to group this component.
Name *
vaishnavi.py
A unique name given to the component that will be used to name associated resources.
Resource type
An error occurred
imagestreams.image.openshift.io "ashish-git" already exists
Create
Cancel



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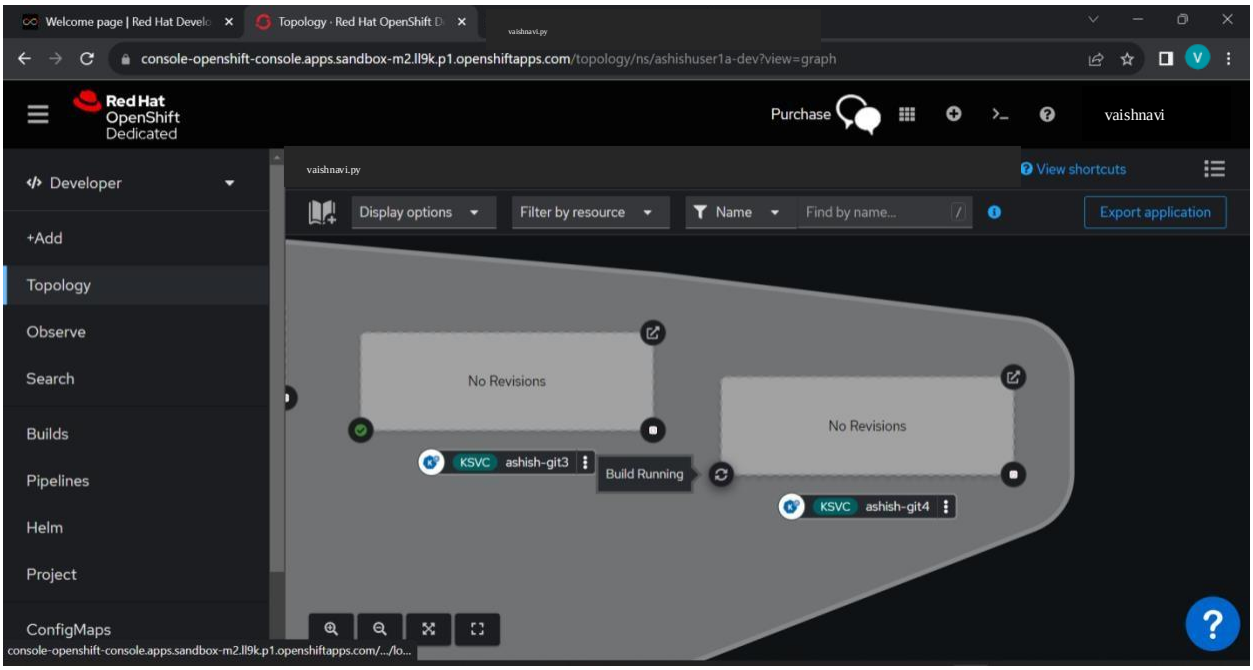
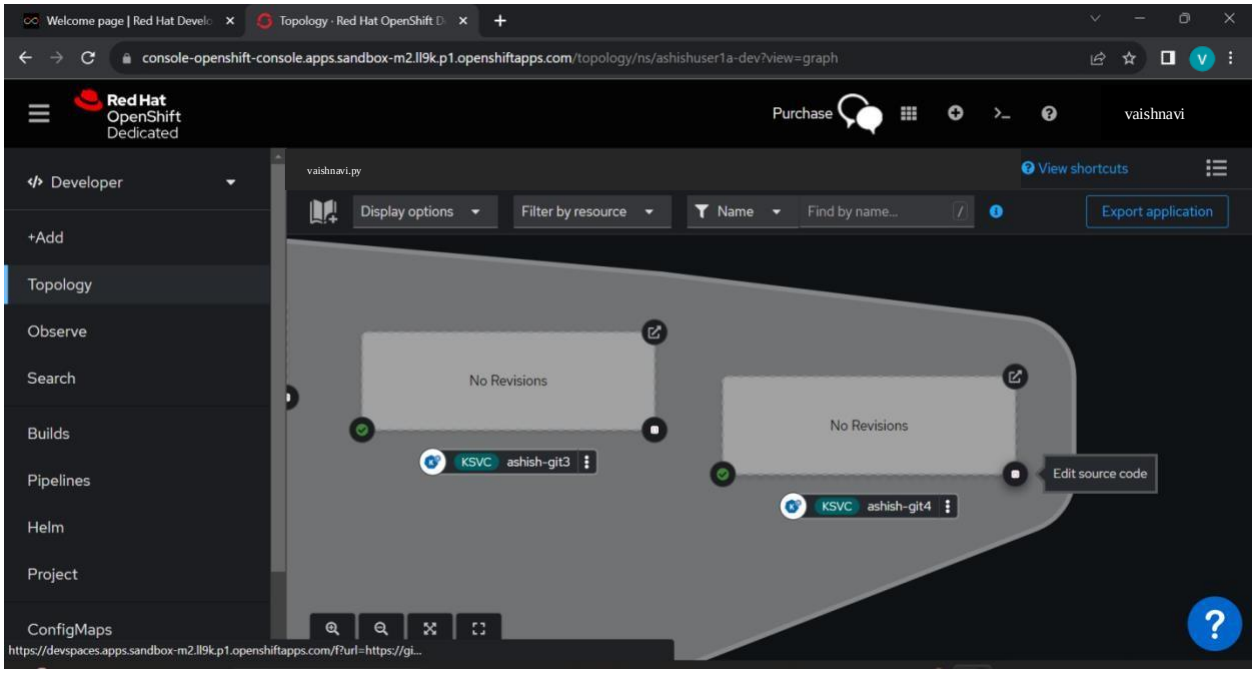
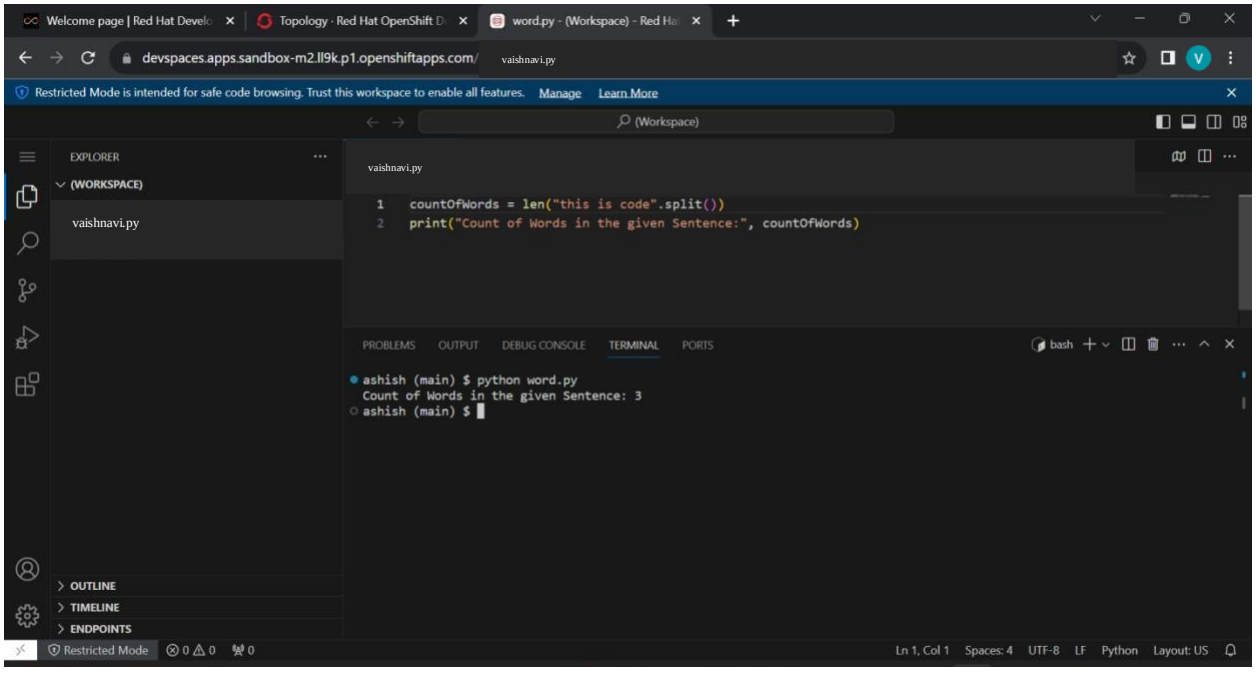
Step 16: select topology and click on build running.



Step 17: select topology and click on edit code.



Step 18: click on login with OpenShift and then DevSandbox, select your file and run in integrated terminal.



Conclusion:

Upon completion of this experiment, we have gained a practical understanding of how to work with Codenvy (now part of Red Hat OpenShift) to provision and scale a website. We have seen

how cloud-based IDEs like Codenvy can simplify the development process, and how platforms like OpenShift can provide powerful tools for managing and scaling applications.