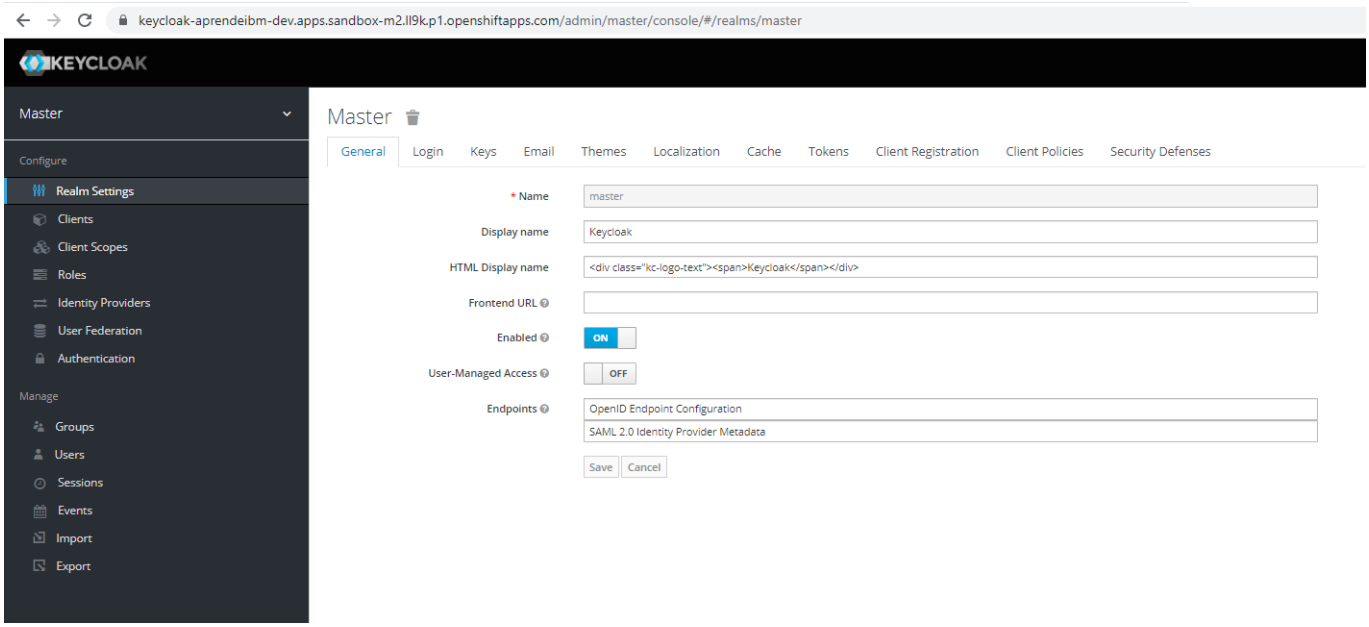
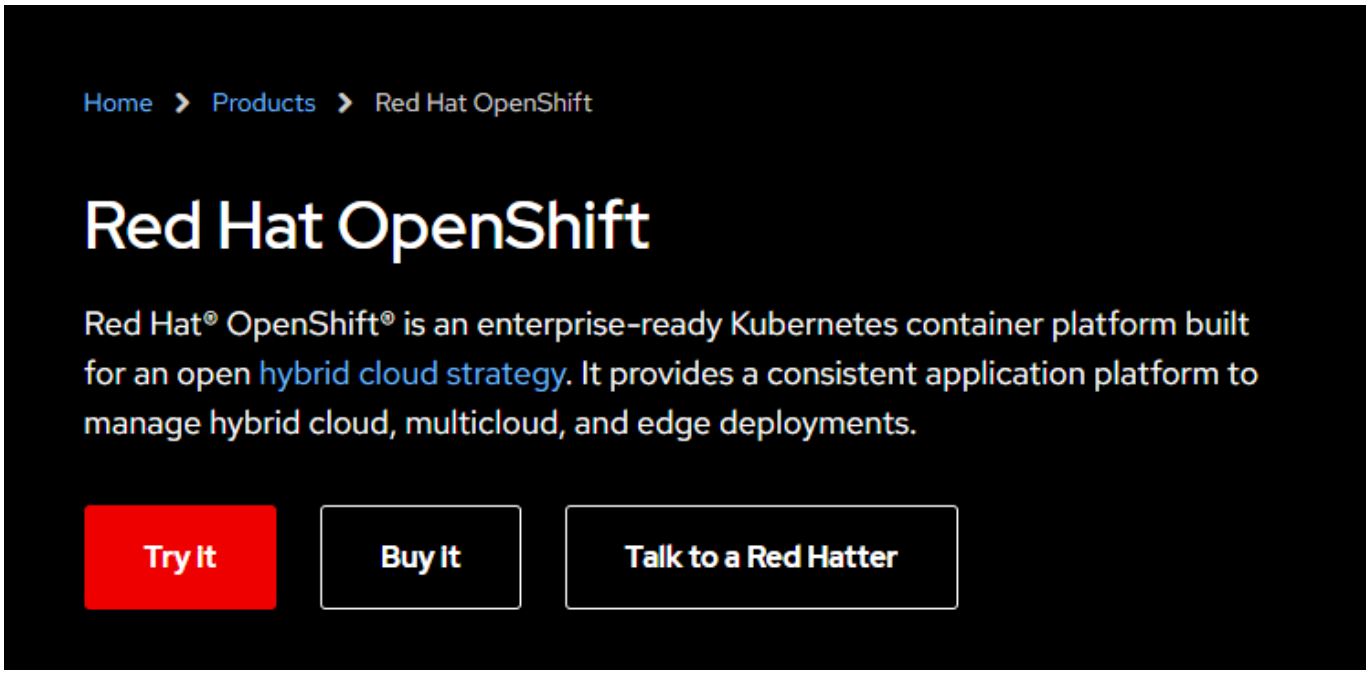
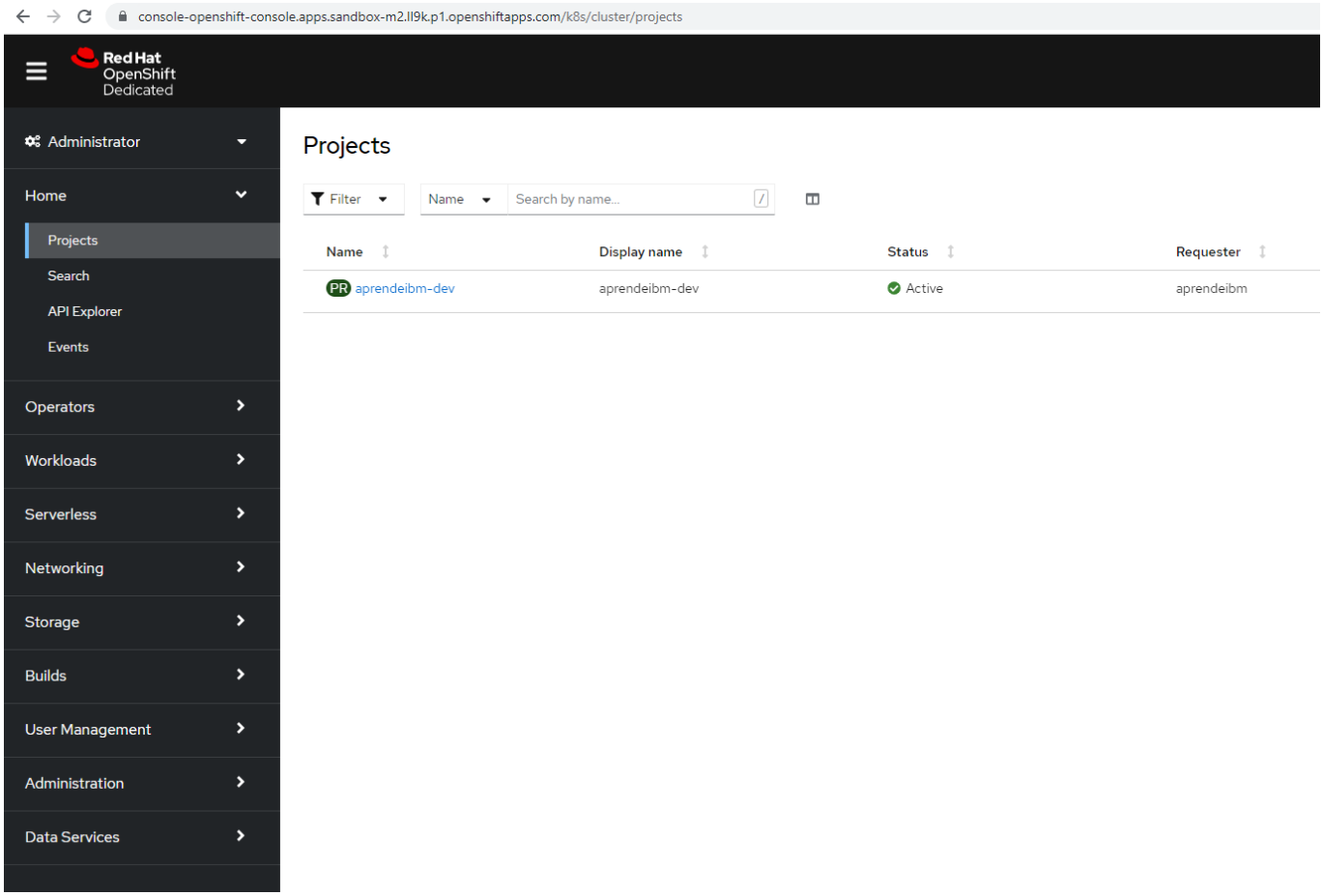
En este artículo vamos a ver los pasos para desplegar **KeyCloak** en un ambiente de **RedHat OpenShift**.



_1. Crear una cuenta trial de **OpenShift** en https://www.redhat.com/en/technologies/cloud-computing/openshift



_2. Luego de disponer de una cuenta ingresamos al panel de administración, dependiendo de los datos ingresados, nos van a crear un proyecto, en este caso el proyecto tiene por nombre (**aprendeibm-dev**)



_3. Ahora vamos a crear los siguientes objetos

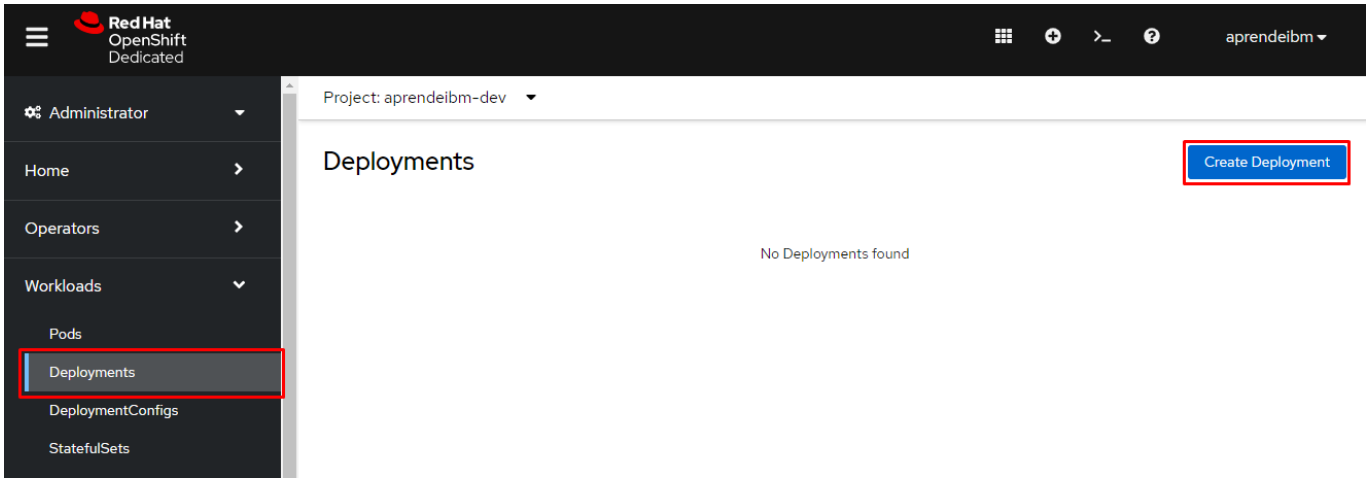
- Deployment
- Service
- Route

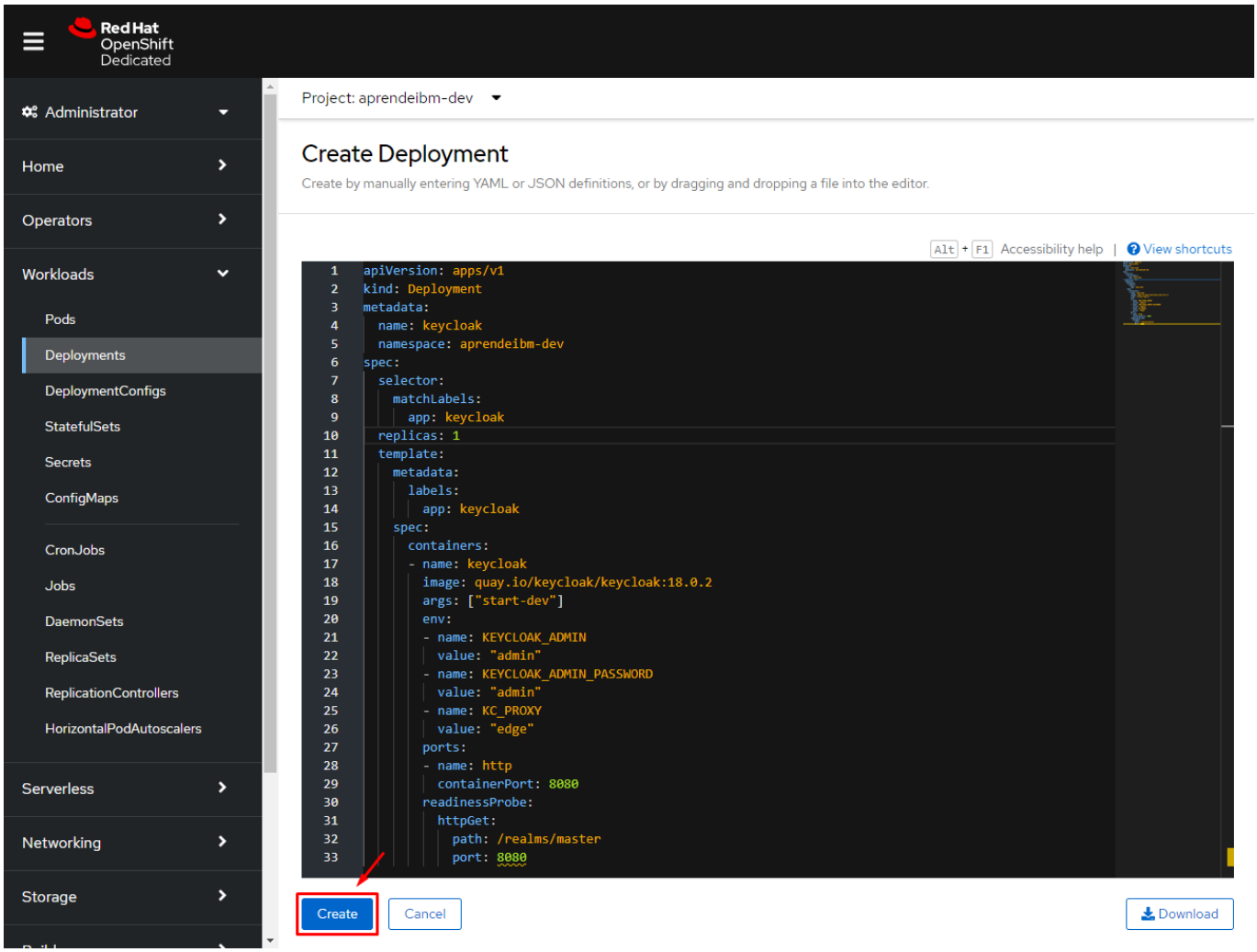
_4. **Crear Deployment**: en el menú nos vamos a ***Workloads>>Deployments*** y luego dar clic en «**Create Deployment**«, adjunto archivo con el contenido a copiar y pegar (only-keycloak-deployment.txt), luego le damos en «**Create**«.

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: keycloak
  namespace: aprendeibm-dev
spec:
  selector:
    matchLabels:
      app: keycloak
  replicas: 1
  template:
    metadata:
      labels:
        app: keycloak
    spec:
      containers:
      - name: keycloak
        image: quay.io/keycloak/keycloak:18.0.2
        args: ["start-dev"]
        env:
        - name: KEYCLOAK_ADMIN
          value: "admin"
        - name: KEYCLOAK_ADMIN_PASSWORD
          value: "admin"
        - name: KC_PROXY
          value: "edge"
        ports:
        - name: http
          containerPort: 8080
        readinessProbe:
          httpGet:
            path: /realms/master
            port: 8080
```

En este apartado es bueno revisar la versión de la imagen que vamos a desplegar de **KeyCloak** ya que en nuevas versiones cambia el **look and feel**, en este caso vamos a utilizar la versión **18.0.2**

Para revisar las versiones disponibles a desplegar en un entorno de **Kubernetes**, visitar: https://www.keycloak.org/getting-started/getting-started-kube


Red Hat OpenShift Dedicated
aprendeibm
Administrator
Home
Operators
Workloads
Pods
Deployments
DeploymentConfigs
StatefulSets
Project: aprendeibm-dev
Deployments
Create Deployment
No Deployments found


Red Hat OpenShift Dedicated
Administrator
Home
Operators
Workloads
Pods
Deployments
DeploymentConfigs
StatefulSets
Secrets
ConfigMaps
CronJobs
Jobs
DaemonSets
ReplicaSets
ReplicationControllers
HorizontalPodAutoscalers
Serverless
Networking
Storage
Project: aprendeibm-dev
Create Deployment
Create by manually entering YAML or JSON definitions, or by dragging and dropping a file into the editor.
Alt + F1 Accessibility help | View shortcuts
apiVersion: apps/v1
kind: Deployment
metadata:
name: keycloak
namespace: aprendeibm-dev
spec:
selector:
matchLabels:
app: keycloak
replicas: 1
template:
metadata:
labels:
app: keycloak
spec:
containers:
- name: keycloak
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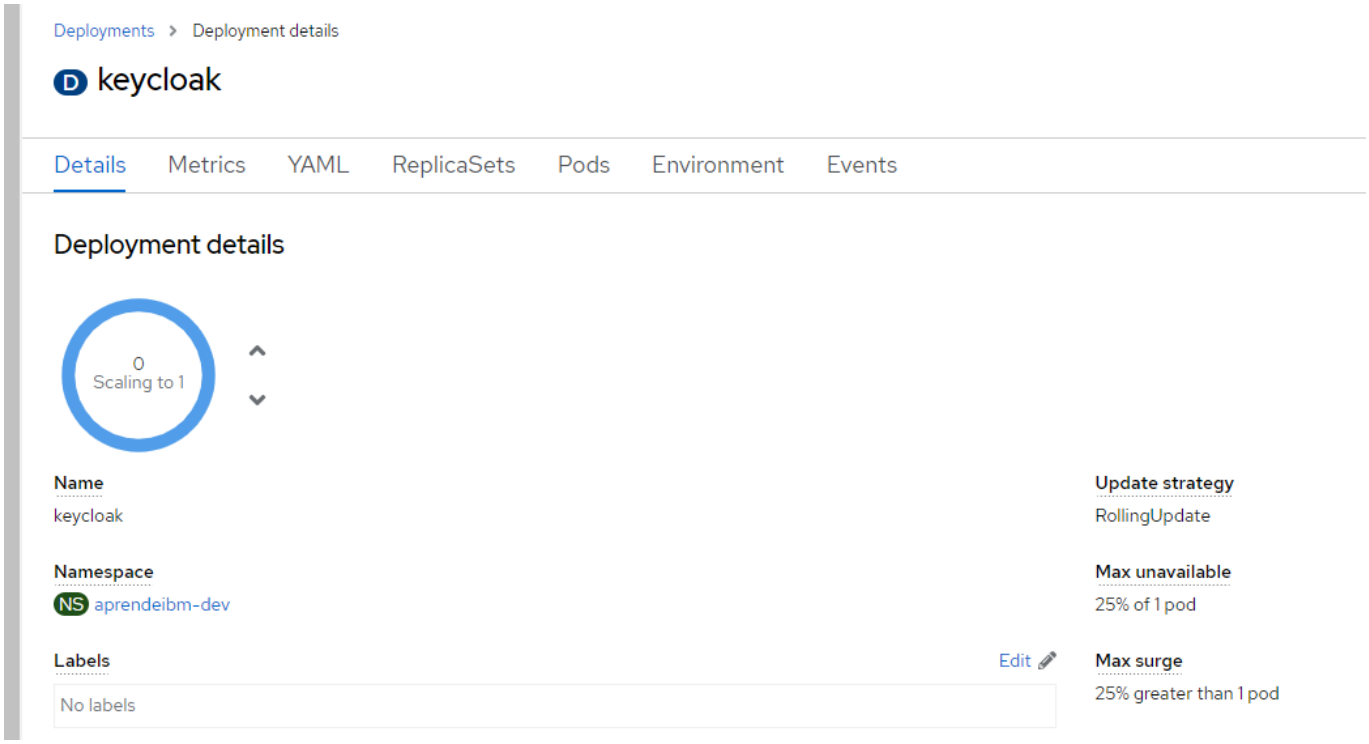
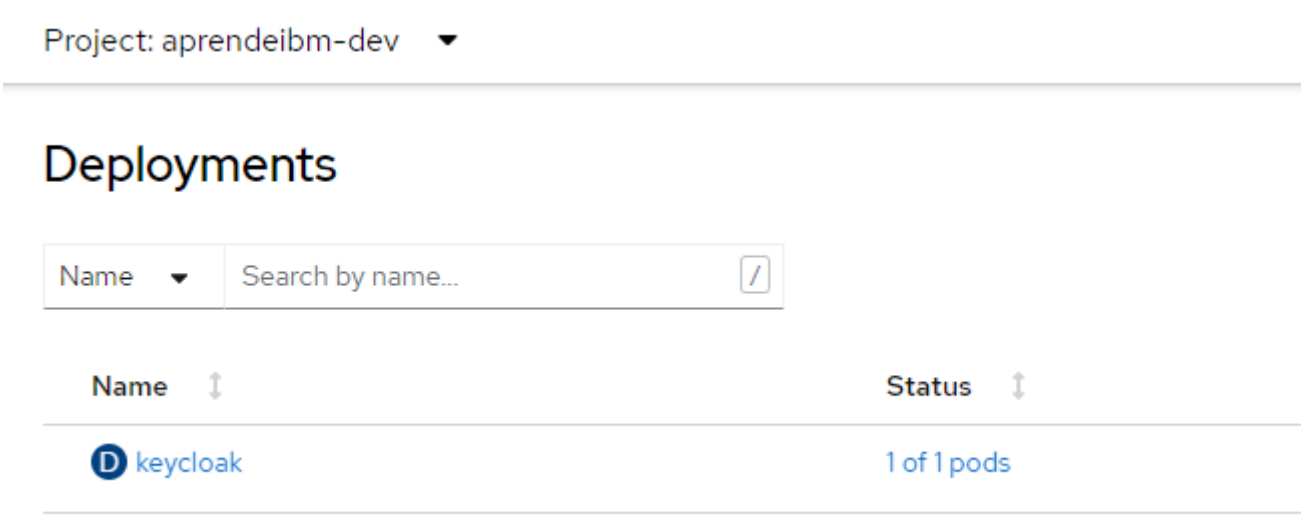
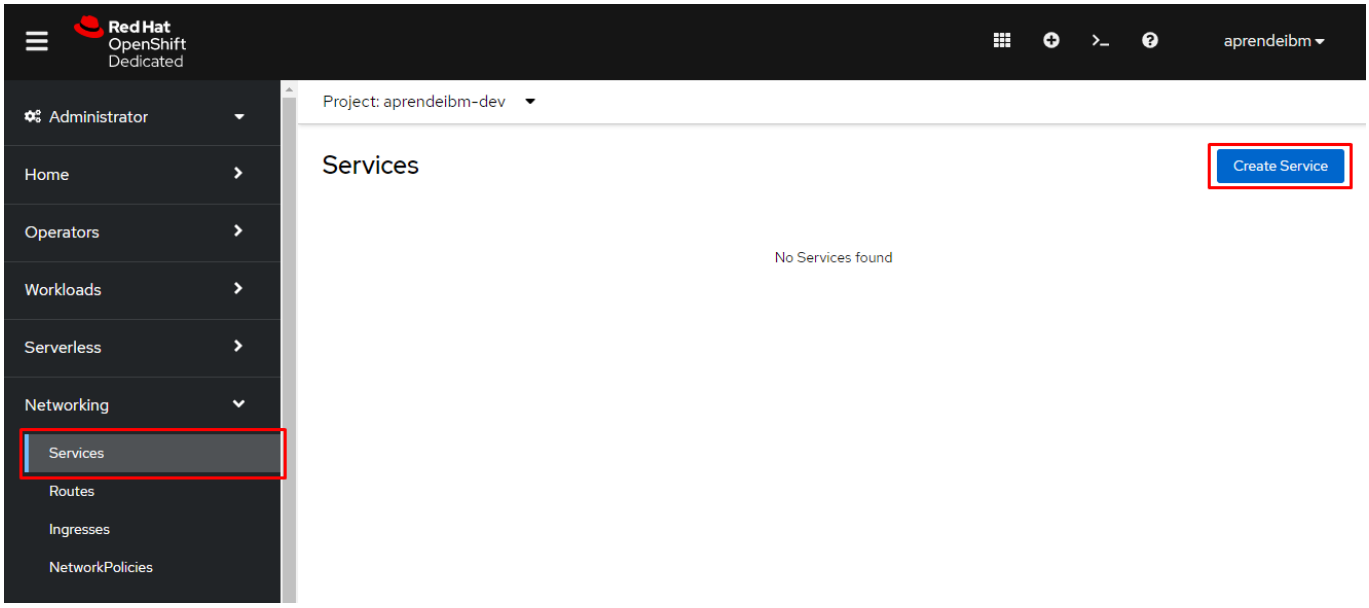
args: ["start-dev"]
env:
- name: KEYCLOAK_ADMIN
value: "admin"
- name: KEYCLOAK_ADMIN_PASSWORD
value: "admin"
- name: KC_PROXY
value: "edge"
ports:
- name: http
containerPort: 8080
readinessProbe:
httpGet:
path: /realms/master
port: 8080
Create
Cancel
Download

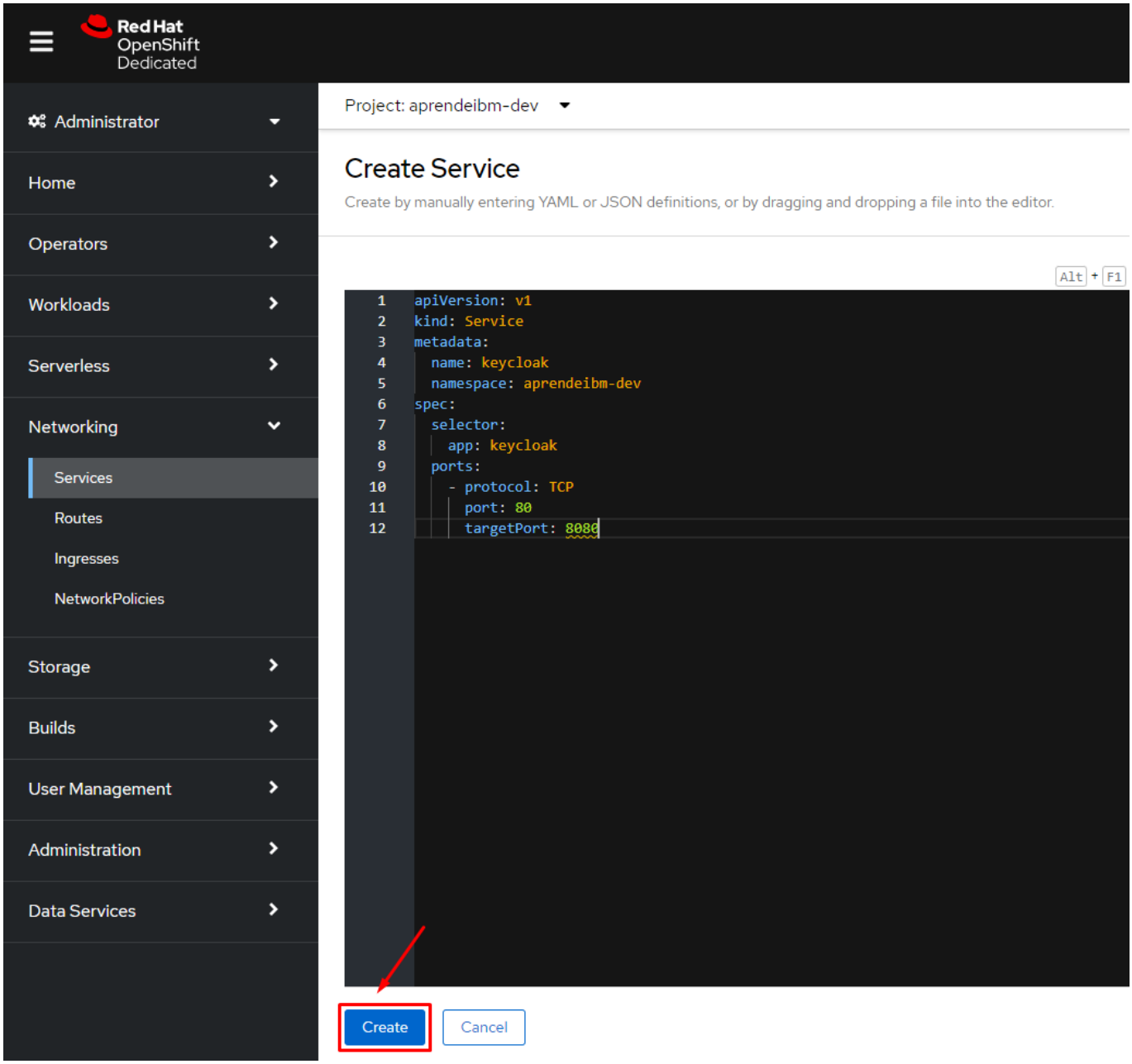


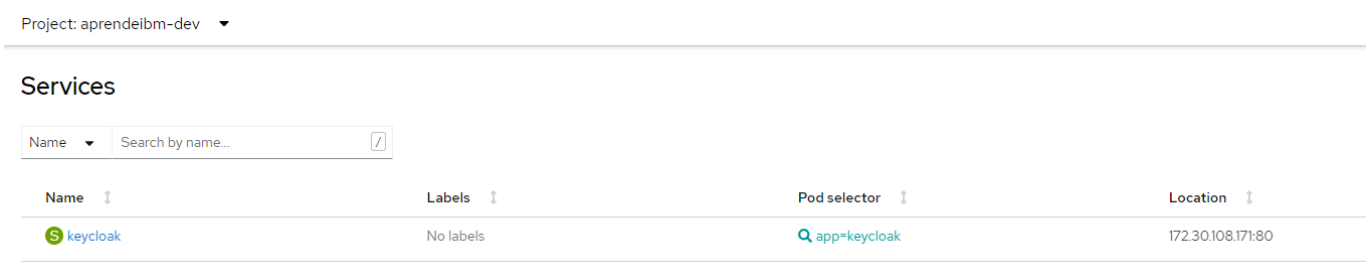


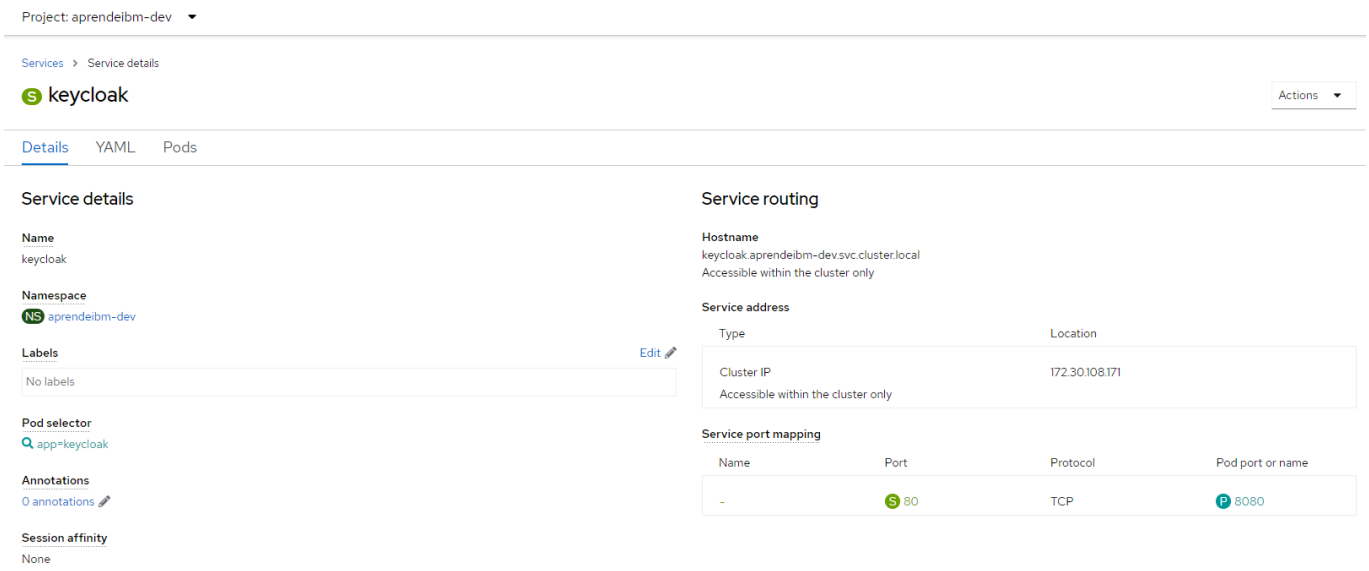
_5. **Crear Service**: Ingresar al menú ***Networking >> Services*** y clic en «**Create Service**«, ahí debemos colocar lo siguiente, se adjunta (only-keycloak-service.txt).

```yaml
apiVersion: v1
kind: Service
metadata:
  name: keycloak
  namespace: aprendeibm-dev
spec:
  selector:
    app: keycloak
  ports:
    - protocol: TCP
      port: 80
      targetPort: 8080
```

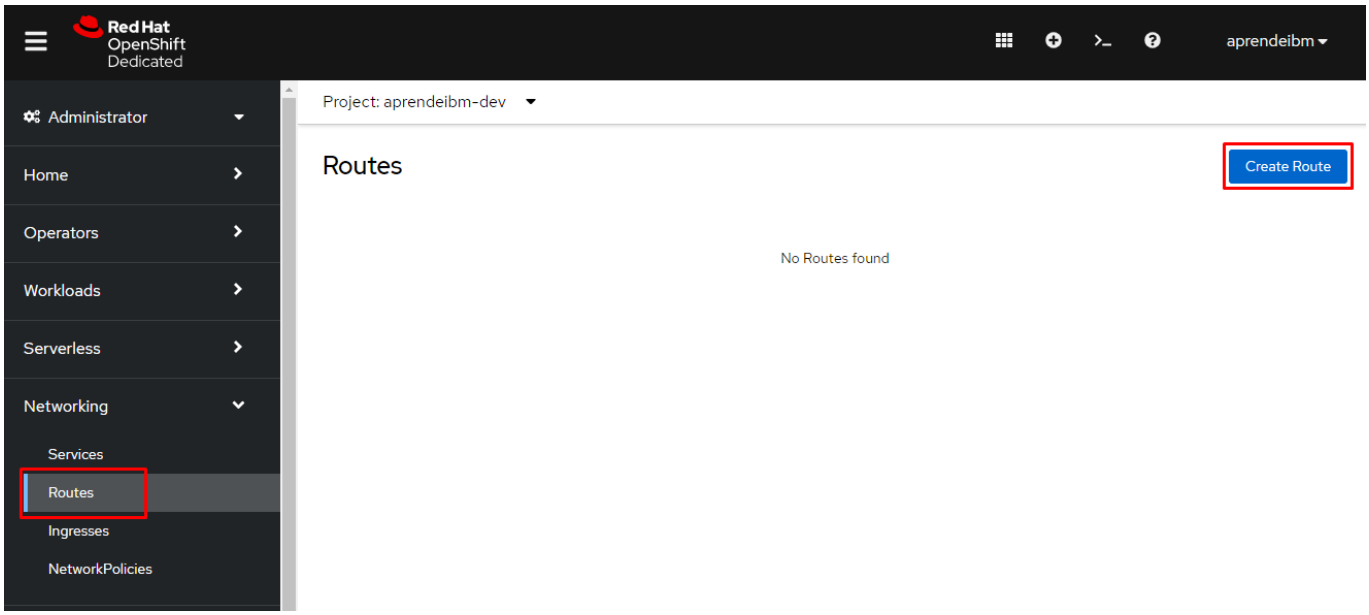


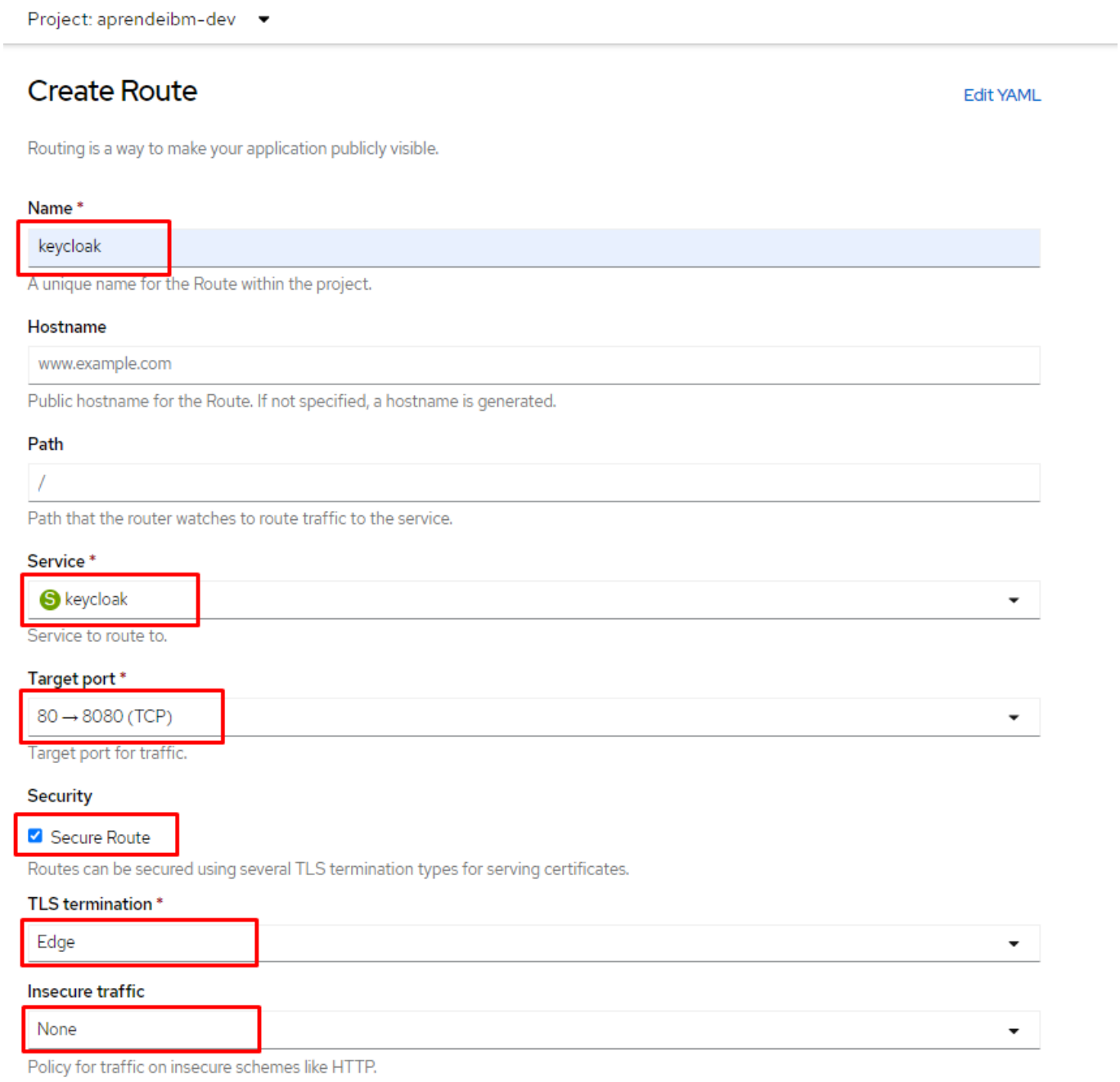

Red Hat OpenShift Dedicated
Administrator
Home
Operators
Workloads
Serverless
Networking
Services
Routes
Ingresses
NetworkPolicies
Storage
Builds
User Management
Administration
Data Services
Project: aprendeibm-dev
Create Service
Create by manually entering YAML or JSON definitions, or by dragging and dropping a file into the editor.
Alt + F1
1 apiVersion: v1
2 kind: Service
3 metadata:
4 name: keycloak
5 namespace: aprendeibm-dev
6 spec:
7 selector:
8 app: keycloak
9 ports:
10 - protocol: TCP
11 port: 80
12 targetPort: 8080
Create
Cancel


Project: aprendeibm-dev
Services
Name
Search by name...
Name
Labels
Pod selector
Location
keycloak
No labels
app=keycloak
172.30.108.171:80

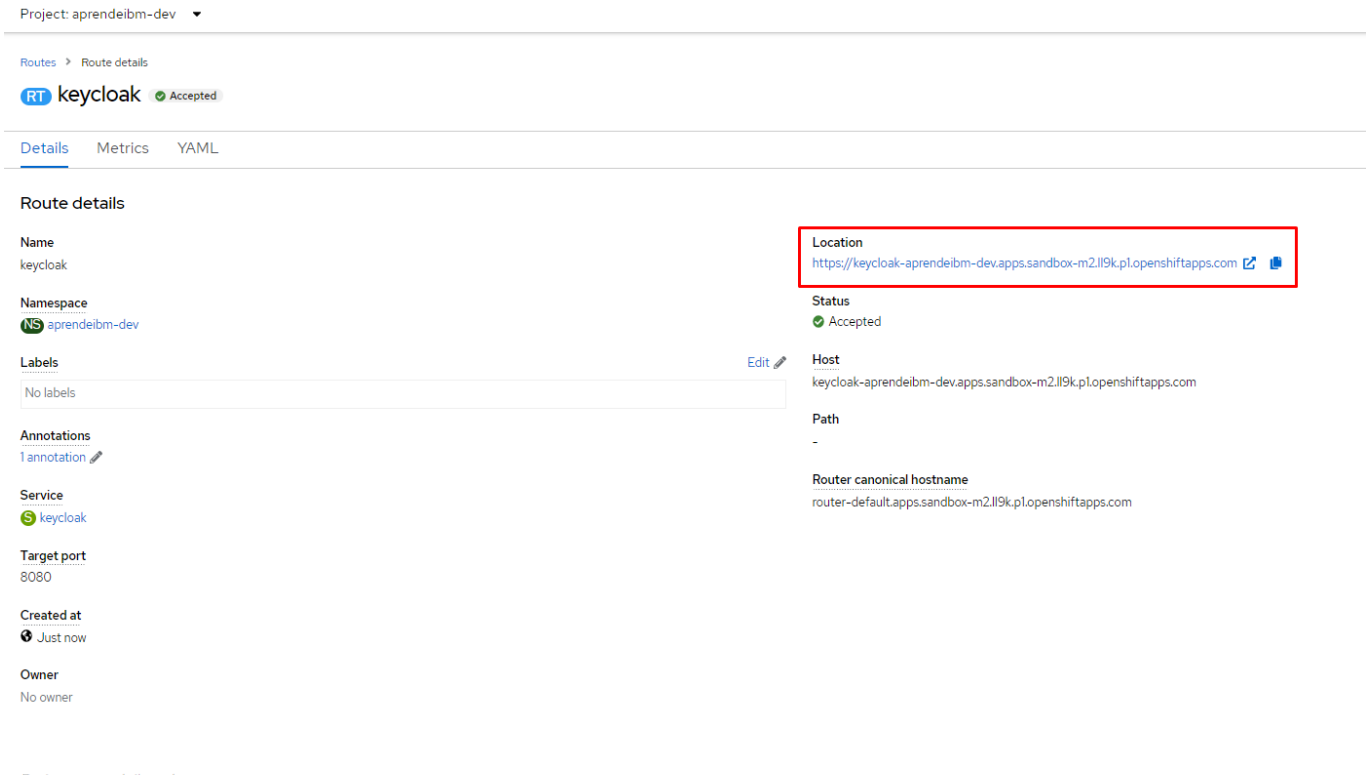


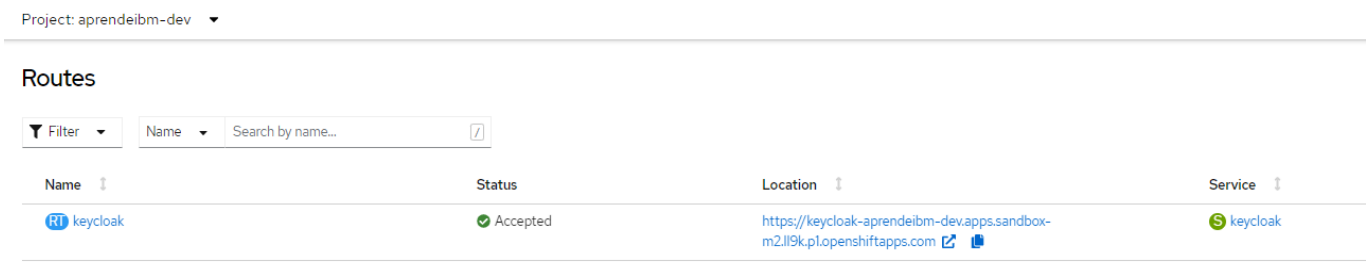
_6. **Crear Route**: Ingresar al menú, ***Networking>>Routes*** y luego clic en «**Create Route**»



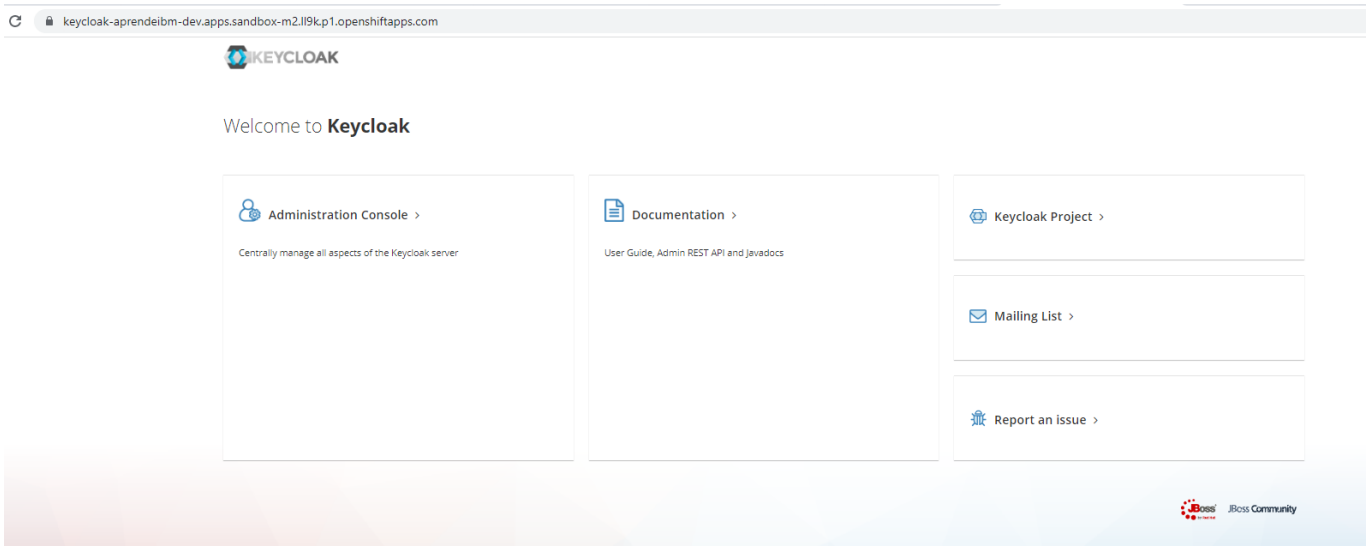


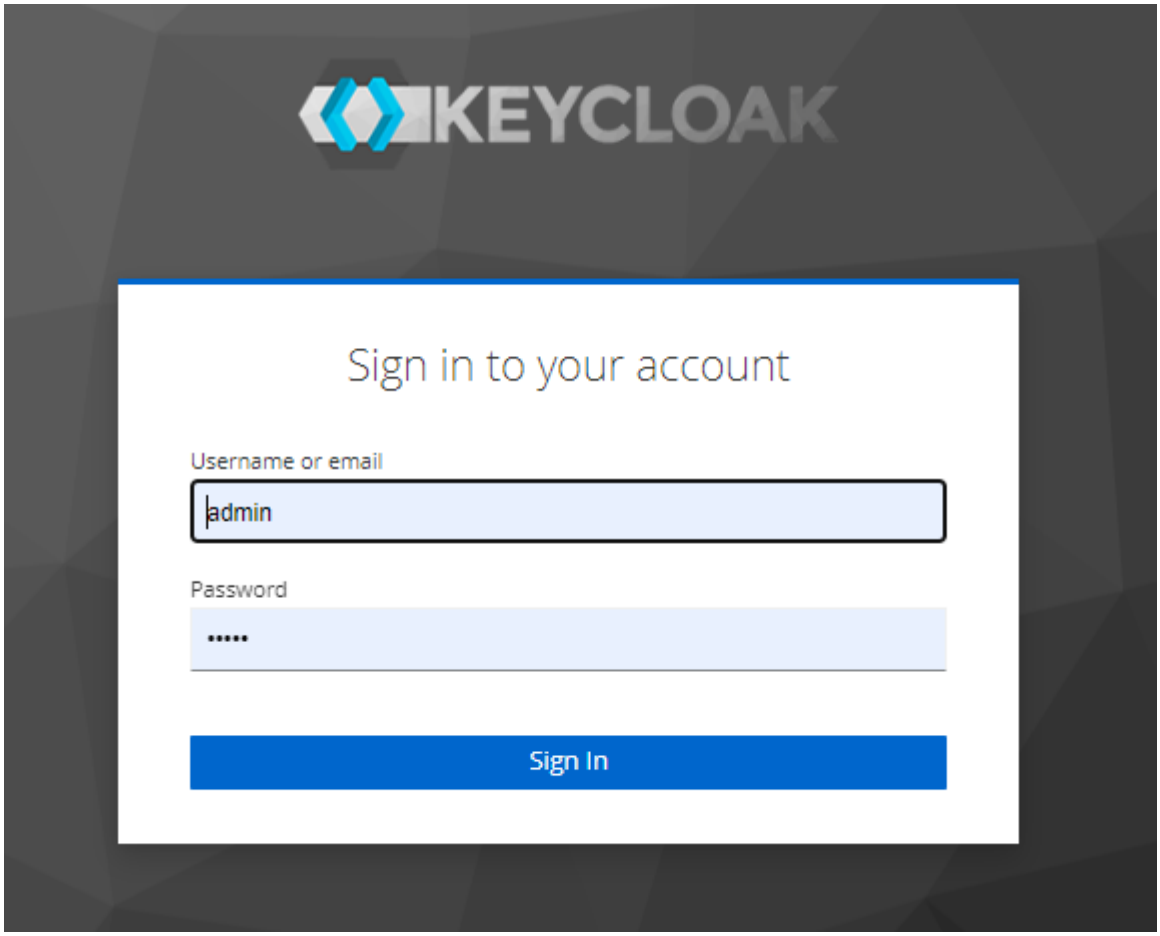
Aquí debemos seleccionar el **Service**, **Target port**, **Security**, **TLS terminarion (Edge** para tener https en la ruta que va a exponer nuestro Route**)**, **Insecure traffic** según la imagen. Luego presionar en «**Create**«.

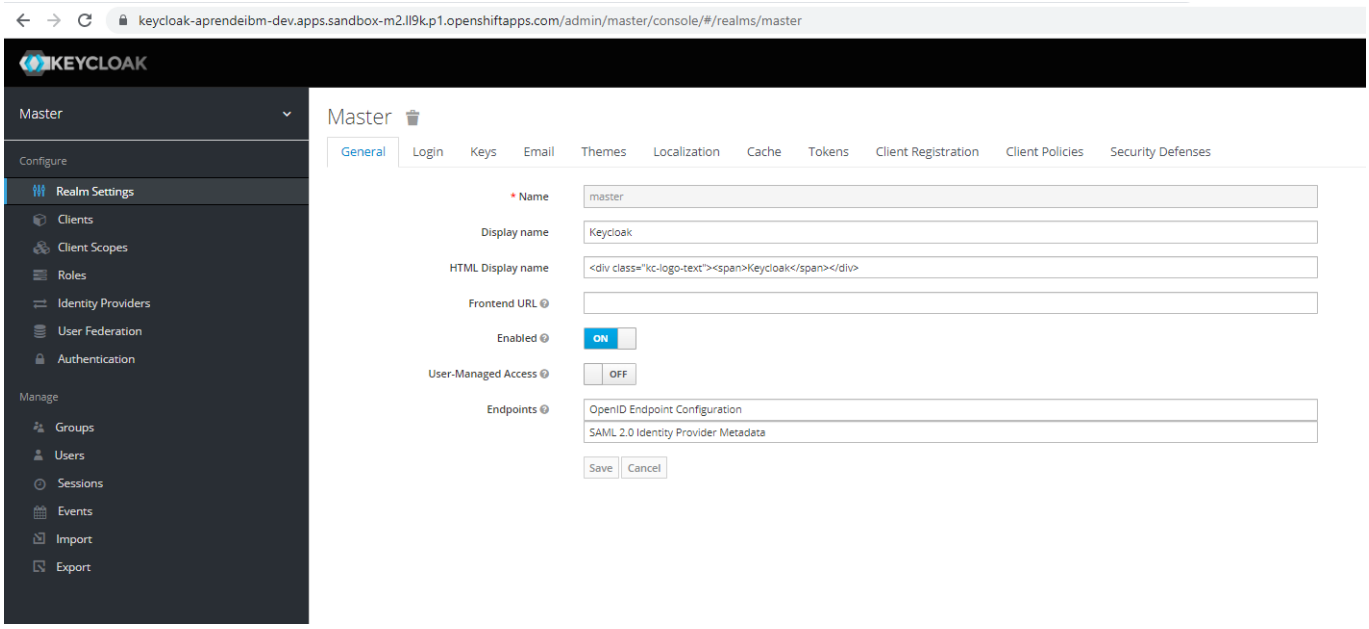




_7. Ingresar a la ruta indicada en el «**Location**»




KEYCLOAK
Sign in to your account
Username or email
admin
Password
Sign In


keycloak-aprendeibm-dev.apps.sandbox-m2.ll9k.p1.openshiftapps.com/admin/master/console/#/realms/master
KEYCLOAK
Master
Configure
Realm Settings
Clients
Client Scopes
Roles
Identity Providers
User Federation
Authentication
Manage
Groups
Users
Sessions
Events
Import
Export
Master
General
Login
Keys
Email
Themes
Localization
Cache
Tokens
Client Registration
Client Policies
Security Defenses
* Name
master
Display name
Keycloak
HTML Display name
Keycloak
Frontend URL
Enabled
ON
User-Managed Access
OFF
Endpoints
OpenID Endpoint Configuration
SAML 2.0 Identity Provider Metadata
Save
Cancel

Julio Pari (IT Architect IBM)

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