Lab 4

Portable Technologies in Cloud

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CODE: CLO835

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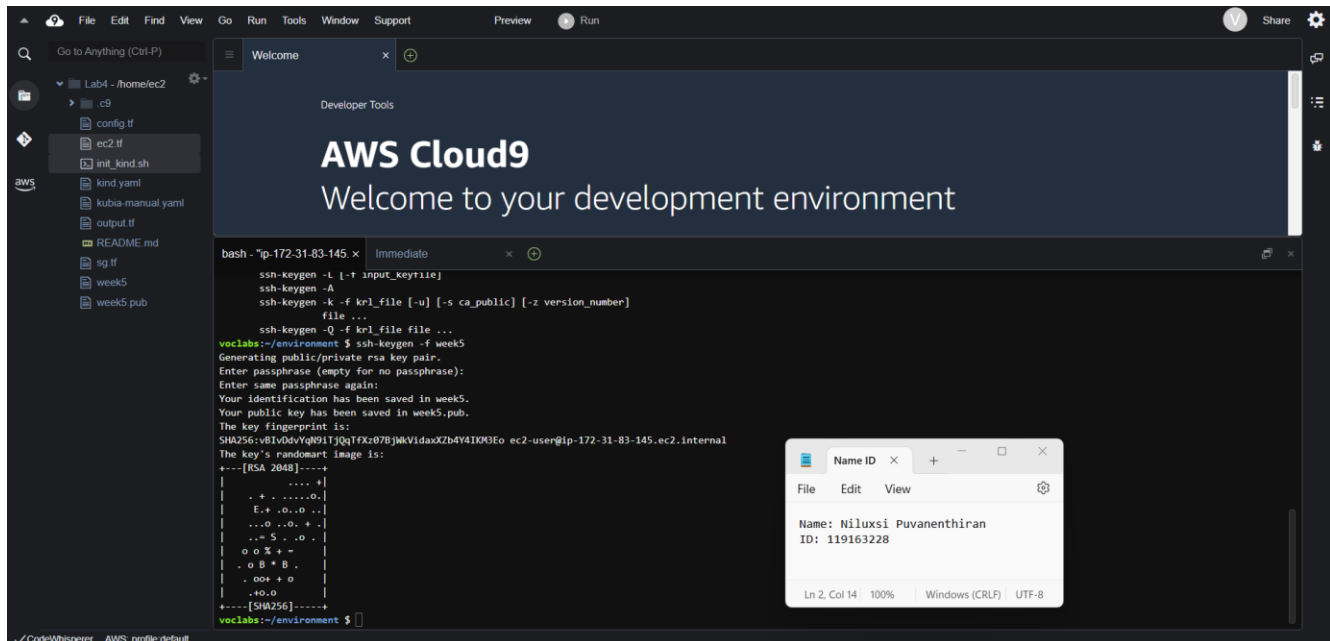
Student Number: 119163228
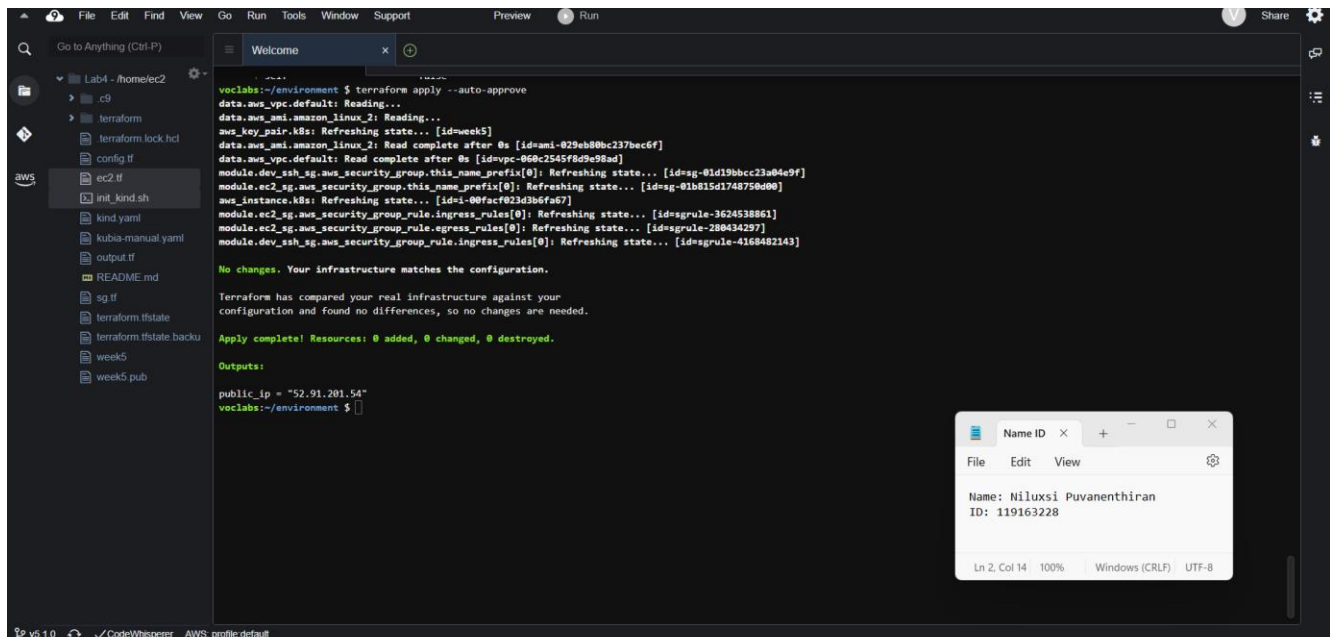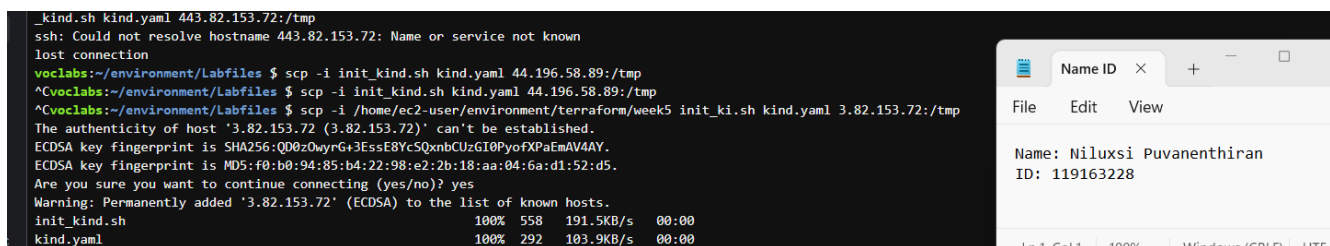
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PREPARING THE CLUSTER

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Screenshot 7 Verified cluster running

```
kind-control-plane   Ready    Master   109s    V1.19.11
[ec2-user@ip-172-31-86-28 tmp]$ kubectl run nginx --image nginx
pod/nginx created
[ec2-user@ip-172-31-86-28 tmp]$ kubectl  get pods
-bash: kubectl  get: command not found
[ec2-user@ip-172-31-86-28 tmp]$ kubectl get pods
NAME    READY   STATUS    RESTARTS   AGE
nginx   1/1     Running   0          26s
[ec2-user@ip-172-31-86-28 tmp]$ kubectl get pods --all-namespaces
NAMESPACE           NAME                                           READY   STATUS    RESTARTS   AGE
default             nginx                                          1/1     Running   0          50s
kube-system         coredns-f9fd979d6-98x8m                        1/1     Running   0          3m24s
kube-system         coredns-f9fd979d6-jwp2z                        1/1     Running   0          3m24s
kube-system         etcd-kind-control-plane                        1/1     Running   0          3m31s
kube-system         kindnet-6c72p                                  1/1     Running   0          3m24s
kube-system         kube-apiserver-kind-control-plane              1/1     Running   0          3m31s
kube-system         kube-controller-manager-kind-control-plane     1/1     Running   0          3m31s
kube-system         kube-proxy-s78kl                               1/1     Running   0          3m24s
kube-system         kube-scheduler-kind-control-plane              1/1     Running   0          3m31s
local-path-storage  local-path-provisioner-547f784dff-z8jk7        1/1     Running   0          3m24s
```

Name ID

File   Edit   View

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Screenshot 8 nginx pod created, and pods in default namespace and all namespaces were listed

```
[ec2-user@ip-172-31-86-28 tmp]$ kubectl get pod nginx -o yaml
apiVersion: v1
kind: Pod
metadata:
  creationTimestamp: "2023-07-01T21:10:13Z"
  labels:
    run: nginx
  name: nginx
  namespace: default
  resourceVersion: "931"
  selfLink: /api/v1/namespaces/default/pods/nginx
  uid: 6d0f5b72-7fb3-49ea-942f-b42767b60ce4
spec:
  containers:
  - image: nginx
    imagePullPolicy: Always
    name: nginx
    resources: {}
    terminationMessagePath: /dev/termination-log
    terminationMessagePolicy: File
    volumeMounts:
    - mountPath: /var/run/secrets/kubernetes.io/serviceaccount
      name: default-token-gqpzv
      readOnly: true
  dnsPolicy: ClusterFirst
  enableServiceLinks: true
```

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Screenshot 9retrieved pod's descriptor

```
    podIP: 10.244.0.5
    podIPs:
    - ip: 10.244.0.5
    qosClass: BestEffort
    startTime: "2023-07-01T21:10:13Z"
[ec2-user@ip-172-31-86-28 tmp]$ kubectl port-forward nginx 8080:80
-bash: kubectl port-forward: command not found
[ec2-user@ip-172-31-86-28 tmp]$ kubectl port-forward nginx 8080:80
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::1]:8080 -> 80
Handling connection for 8080
```

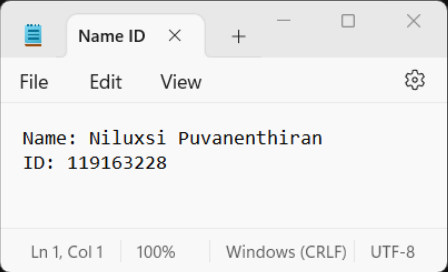Screenshot 10 accessing nginx webserver running in a pod

Screenshot 11 Curl localhost

Screenshot 12 Pod manifest created

Modified command used k run kubia --image luksa/kubia --dry-run=<mark>client</mark> -o yaml>kubia-manual.yaml

Screenshot 13 Kubia deployment with YAML Manifest

Screenshot 14 Kubia deployment

Screenshot 15 Retrieving logs pingpong

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