# Experiment 03

**Aim:** To understand the Kubernetes Cluster Architecture, install and Spin Up a Kubernetes Cluster on Linux Machines/Cloud Platforms.

**Theory:**

A Kubernetes Cluster is a set of nodes that run containerized applications. Containerizing applications packages an app with its dependencies and some necessary services.

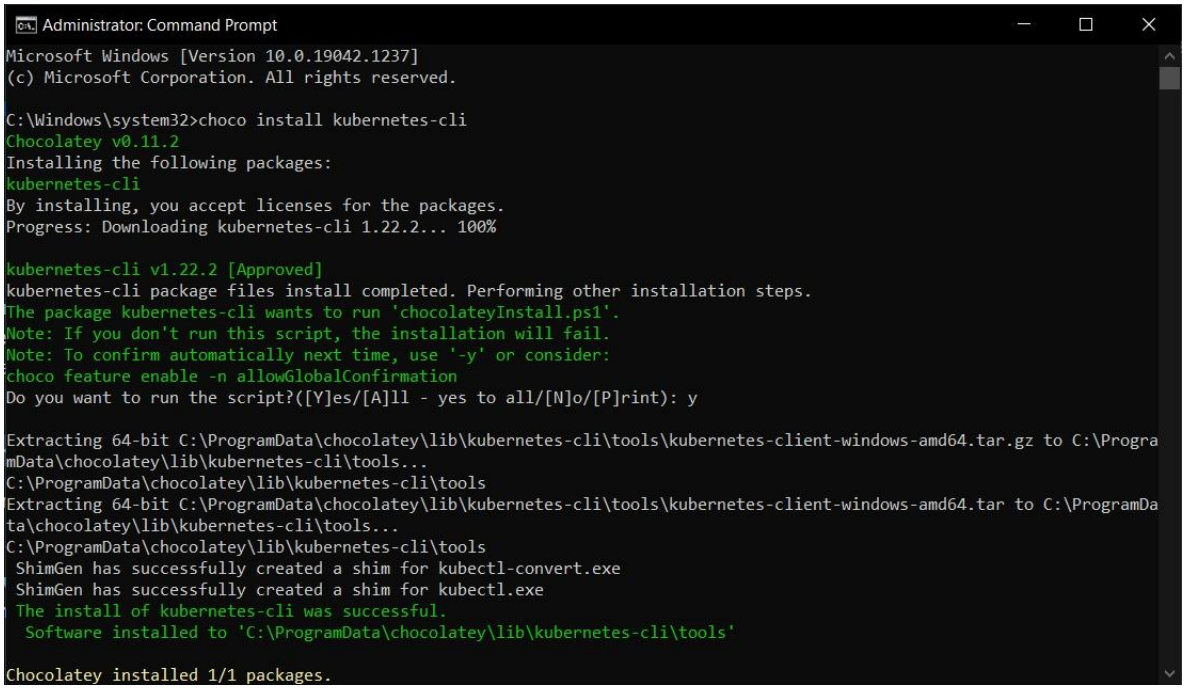
They are more lightweight and flexible that virtual machines. IN this way, Kubernetes Cluster allow for applications to be more easily developed, moved and managed.

Kubernetes Cluster allow containers to run across multiple machines and environments: virtual, physical, clou-based and on-premises. Kubernetes containers are not restricted to a specific operating system unlike virtual machines. Instead, they are able to share operating systems and run anywhere.

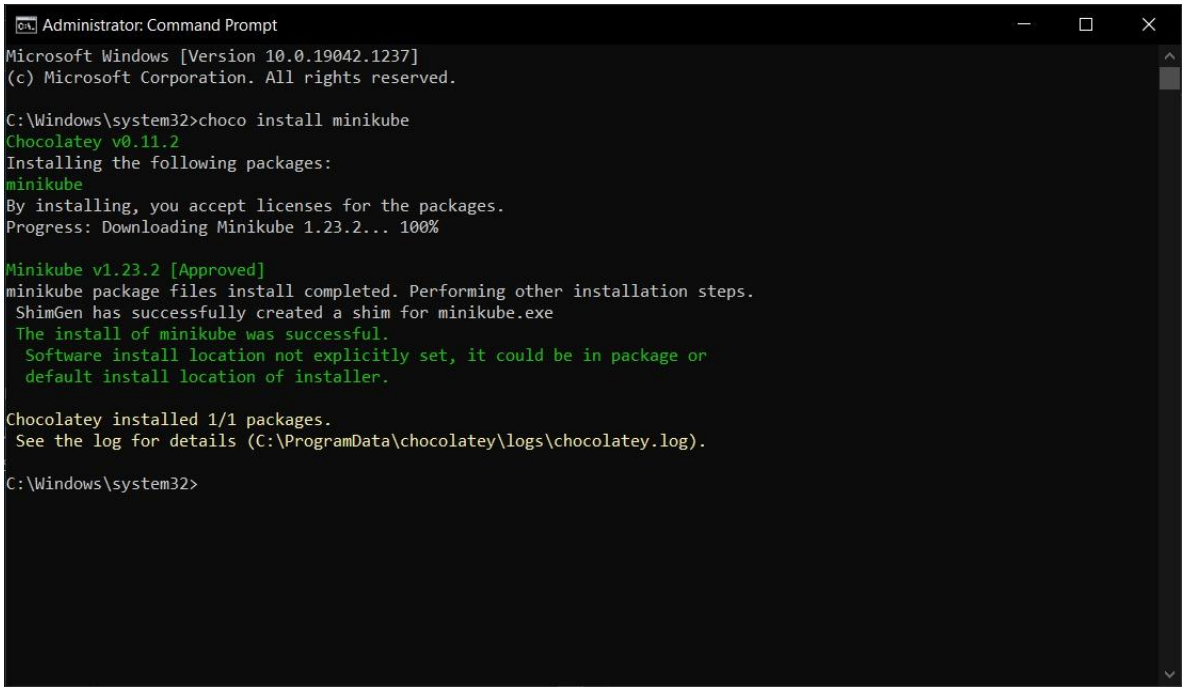
Kubernetes clusters are comprised of one master node and a number of worker nodes. These nodes can either be physical computers or virtual machines depending on the cluster.

**Outputs:**

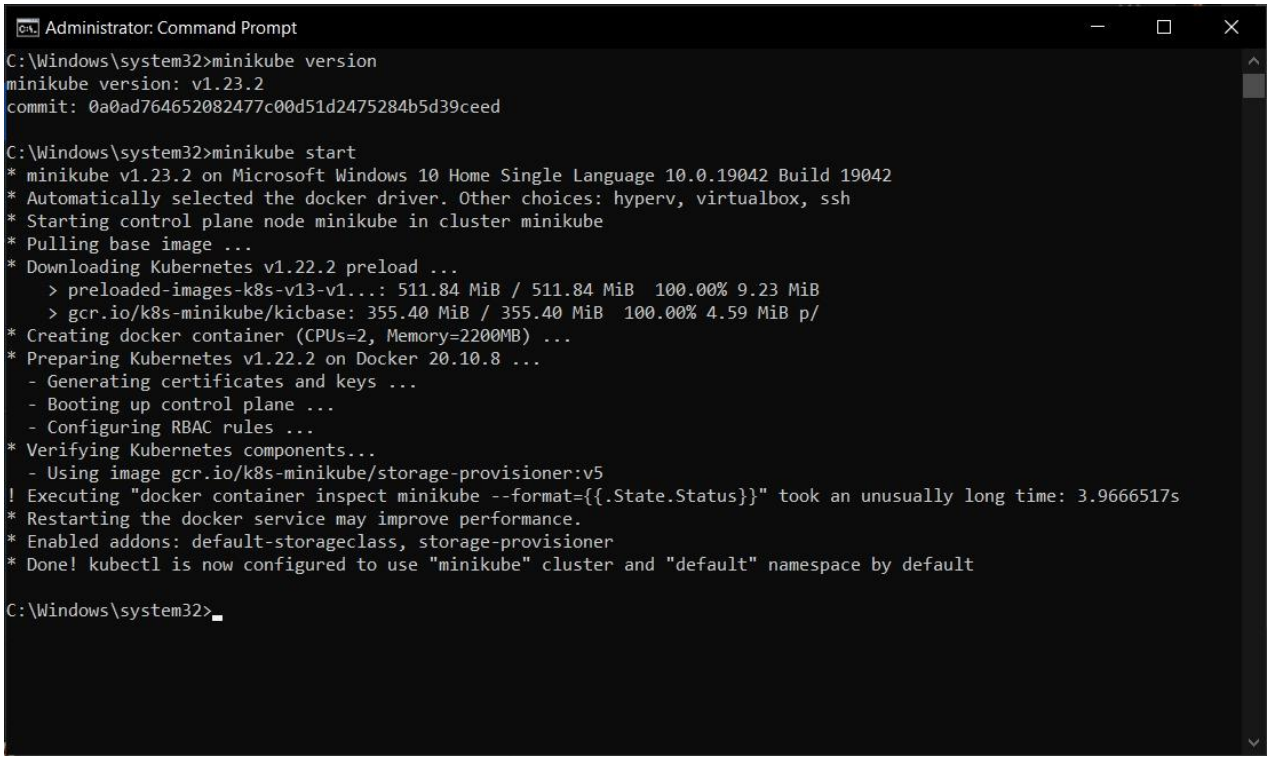
Installing the Kubernetes-cli using chocolatey.

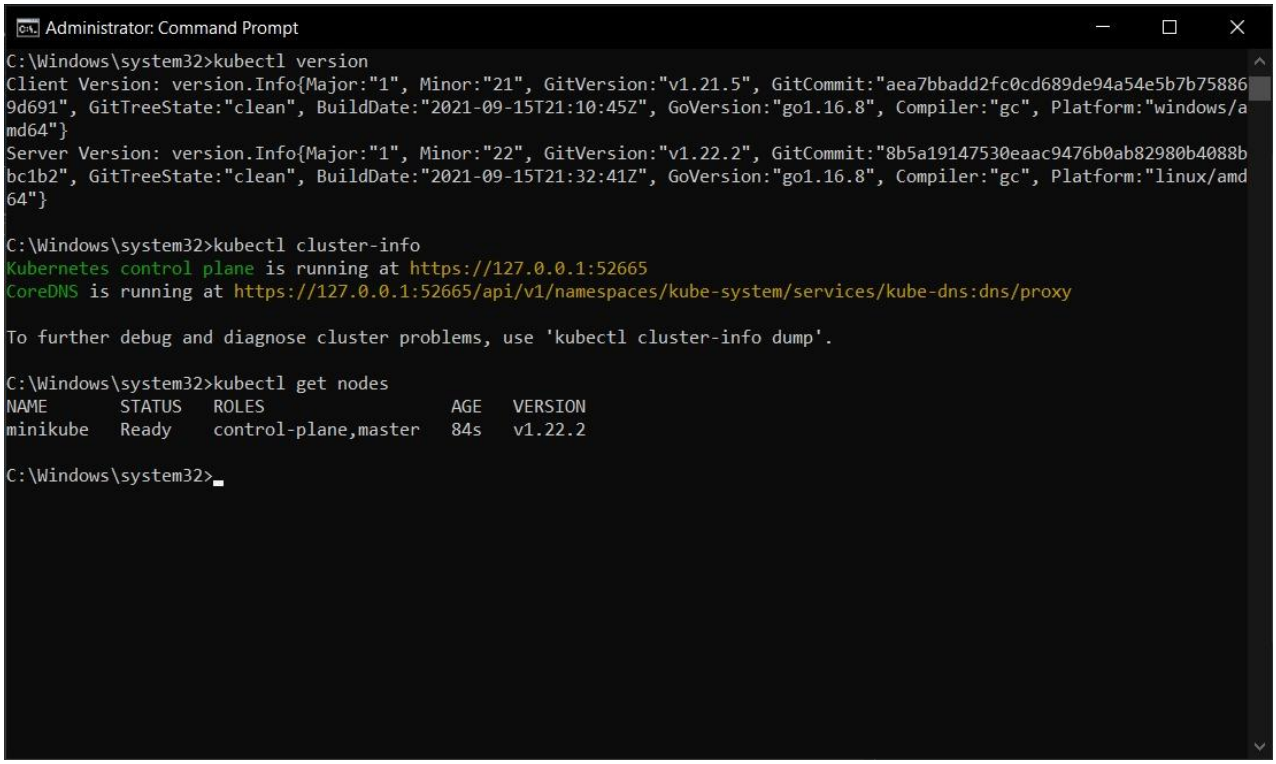



## Installing minikube:




## Spinning up Kubernetes cluster:




**Conclusion:** Kubernetes architecture was studied in detail and a Kubernetes cluster was spun up successfully.