**KUBERNETES**

Kubernetes (also known as k8s or “kube”) is an **open source container orchestration** platform that **automates** many of the manual processes involved in **deploying, managing, and scaling** containerized applications.

**What is a Kubernetes cluster?**

A working Kubernetes deployment is called **a cluster**, which is a group of hosts **running Linux containers**. Kubernetes cluster as **two parts**: the control plane and the compute machines, or nodes.

Each node is its **own Linux environment**, and could be either a physical or virtual machine. Each **node runs pods**, which are made up of **containers**.

The **control plane** is responsible for **maintaining the desired state of the cluster**, such as which applications are running and which container images they use. Compute machines actually run the **applications and workloads**. The control plane takes commands from an administrator and relays those instructions to the compute machines.

Kubernetes cluster **defines which applications or other workloads** should be running, along with which images they use, which resources should be made available to them, and other such configuration details.