**Docker Containers & Kubernetes Basics**

**Duration – 3 days**

**Day-1**

**Introduction to Docker**

* **Use cases**
* **Major components of Docker**
* **Docker architecture fundamentals**

**Docker architecture**

* **Docker images**
* **Docker registry**
* **Docker containers**

**Installation of Docker**

* **Using Docker Desktop**

**Day-2**

**Image Creation and Sharing**

* **Managing images**
* **Listing images**
* **Downloading images**
* **Finding images**

**Dockerizing applications**

* **The hello world example**
* **Interactive container**
* **Working with Containers**
* **Optimization of Docker File**
* **Private Registry**
* **Publishing Image on Docker Hub**

**Container usage**

* **Running a web app in a container**
* **Investigating a container**
* **Port mapping**
* **Viewing the logs**
* **Looking at processes**
* **Stopping and restarting**
* **Removing a container**

**Docker Networking**

* **Docker Network & Types**
* **Container linking and naming**
* **Linking and environment variables**
* **Custom Bridge & OVS**

**Day-3**

**Kubernetes**

* **Kubernetes Introduction**
* **Kubernetes Architecture Overview**
* **Kubernetes Concepts –** 
  + **Pod’s,**
  + **Replica sets,**
  + **Deployments**
  + **Services**
* **Working with YAML in Kubernetes**