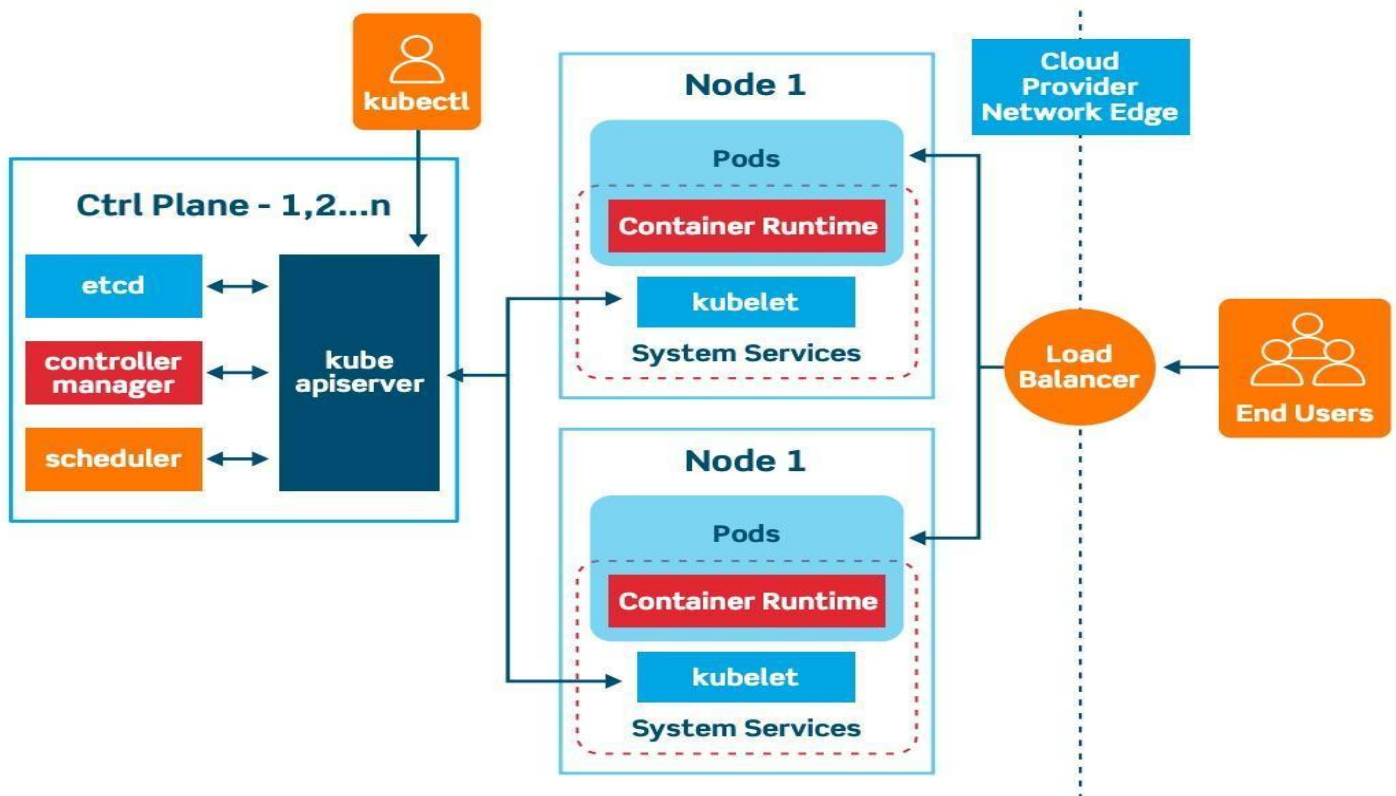




LEARN, THINK, INNOVATE



kubernetes



Overview

Let eMexo Technologies **Best Kubernetes Training in Electronic City Bangalore** take you from the fundamentals of Kubernetes to Advance Kubernetes and make you an expert in developing real-time Kubernetes services. Here are the major topics we cover under this Kubernetes course Syllabus **Kubernetes Introduction, Kubernetes basics, Advanced topics, Kubernetes administrator, Packaging and deploying on Kubernetes, Continuous development with Kubernetes, Serverless on Kubernetes, Microservices, Installing Kubernetes using kubeadm, On-prem or cloud-agnostic Kubernetes, and Project**. Each topic will be covered in a practical way with examples for our Kubernetes Course in Electronic City Bangalore.

All the topics will be covered with Practical and hands-on training. Our trainers have industry experience with live project experience in cutting-edge technologies which they teach. We hire only the Best Kubernetes industry specialists as trainers for our **Kubernetes Certification Course in Electronic City Bangalore**.

If you are looking for **Kubernetes Certification Training in Electronic City Bangalore**, eMexo Technologies is the **Best Kubernetes Training Institute in Electronic City Bangalore**. Come over to our training institute for a free demo class. Let our trainer give you a demo on **Kubernetes** and only then do you take the decision to enroll in the training program.

Training Features

Real-life Case Studies

Do a real-life case study to understand the usage in real-world scenarios.

Assignments

Each class will be followed by a practical assignment which can be completed before the next class.

Preparation for interview

Our trainers are professionals working in multinational corporations. They are experts in their field and they know exactly what the interviewer will look for in the candidate. Experienced trainers not only share interview questions but also conduct mock interviews to help prepare for the actual interview.

Key Features

eMexo Technologies offers the **Best Kubernetes Training Course in Electronic City Bangalore** with the TOP industry expert trainers.

Here are the key features.

- ★ Free Demo Class Available
- ★ Practical Approach
- ★ Expert & Certified Trainers
- ★ 100% Job Oriented Training
- ★ Real World use cases and Scenarios
- ★ Completed 500+ Batches
- ★ Certification Guidance

Unit 1: Kubernetes Introduction

Learning Objective: Introduction to Kubernetes, setup, and running docker containers. Running your first app in Kubernetes and load balancing using a load balancer.

- Containers introduction
- Kubernetes setup
- Local setup with Minikube
- Installing Kubernetes using the docker client
- Minikube vs docker client vs kops vs kubeadm
- Introduction to kops
- Building docker images
- Docker image registry
- Running 1st app on Kubernetes
- Service with the load balancer
- Service with AWS ELB load balancer
- Practice test
- Hands-On: Kubernetes setup using Minikube
- Hands-On: Building docker images
- Hands-On: Run the app in Kubernetes
- Hands-On: Load balances the app
- Hands-On: Load balance the app using the AWS load balancer

Unit 2: Kubernetes basics

Learning Objective: Understanding the architecture and pod lifecycle, creating different services, and replicas, and setting the health checks for your pods.

- Node architecture
- Replication controller
- Deployments

- Services
- Labels
- Health checks
- Readiness probe
- Pod state
- Pod lifecycle
- Secrets
- WebUI
- Practice test
- Hands-On: Deploying different kinds of services.
- Hands-On: Replica set and replication controller
- Hands-On: Deployments and health checks

Unit 3: Advanced topics

Learning Objective: Creating persistent volumes, setting up auto-scaling and tolerations, and monitoring resource usage.

- Service Directory
- Configmap
- Ingress controller
- External DNS
- Volumes
- Volumes auto-provisioning
- Pod presets
- Statefulsets
- Daemon sets
- Resource usage monitoring
- Auto Scaling
- Affinity / auto-affinity
- Interpod affinity and anti-affinity
- Taints and tolerations
- Custom Resource Definitions (CRDs)
- Operators
- Practice test
- Hands-On: Using volumes
- Hands-On: Using daemon sets
- Hands-On: Auto Scaling
- Hands-On: Working with statefulsets
- Hands-On: Monitoring the resources
- Hands-On: Using tolerations
- Hands-On: Creating affinity and interpod affinity

Unit 4: Kubernetes administrator

Learning Objective: Managing the users, Maintaining the nodes, making the nodes highly available, and using TLS.

- The Kubernetes master services
- Resource quotas
- Namespaces
- User management
- RBAC
- Networking
- Node maintenance
- High availability
- TLS on ELB using annotations
- Hands-On: Managing user
- Hands-On: Working with networking
- Hands-On: Viewing the resource quotas
- Hands-On: Maintaining the nodes
- Hands-On: Making the nodes highly available

Unit 5: Packaging and deploying on Kubernetes

Learning Objective: Understanding and creating helm charts.

- Introduction to Helm
- Creating your own helm charts
- Hands-On: Working with Helm
- Hands-On: Own helm charts

Unit 6: Continuous development with Kubernetes

Learning Objective: Understanding skaffold on a high level.

- Introduction to skaffold
- Hands-On: Getting to know skaffold

Unit 7: Serverless on Kubernetes

Learning Objective: Understanding serverless and kuberless and what you can do with this.

- Introduction to serverless

- Introduction to kuberless
- Hands-On: Serverless and kuberless

Unit 8: Microservices

Learning Objective: Understanding istio, authenticating the users using istio.

- Introduction to istio
- Mutual TLS
- RBAC with istio
- End-user authentication with istio (JWT)
- Hands-On: Working with Istio
- Hands-On: Authenticating using Istio

Unit 9: Installing Kubernetes using kubeadm

Learning Objective: Installing Kubernetes using kubeadm.

- Introduction to kubeadm
- Hands-On: Running basic commands using kubeadm

Unit 10: On-prem or cloud-agnostic Kubernetes

Learning Objective: Using TLS certificates, understanding Kubernetes dashboard, and working with Prometheus.

- Managing TLS certs with cert-manager
- Kubernetes dashboard
- Kubernetes with Prometheus
- Hands-On: Using TLS certificates
- Hands-On: Dashboard in Kubernetes
- Hands-On: Using Prometheus with Kubernetes

Unit 11: Project

This project shows you how to build and deploy a simple, multi-tier web application using Kubernetes and Docker. This project consists of the following components:

- A single instance Redis master to store entries.
- Multiple replicated Redis instances to serve reads.
- Multiple web frontend instances.
- Deploying PHP application as a stateless application

- Deploying Redis as a stateless application
- Add logging and metrics to the PHP and Redis application
- Viewing the logs and metrics in the Kibana dashboard

FAQs

1. How is the training organized? How much percentage is theoretical and how much is practical hands-on?

We at eMexo believe nothing beats hands-on practice when it comes to learning a concept. Our teaching methodology is 100% practical and hands-on oriented. You learn a concept, you practice it then and there with the trainer. We also give you assignments for each topic which you can practice at home and any doubts regarding the topic can be cleared with the trainer the next day.

2. What is the course duration? How and when do you plan to complete the course?

We generally cover our courses in 30 hours, however, we know that we can't put a hard- stop to learning with a number. Our trainer will make sure that you have learned everything that is part of the curriculum. This could mean 28 hours or 35 hours, doesn't matter.

3. What is the material provided in the training?

We have industry standard course material which is used by our trainers to train you. At the end of the training apart from the notes which you have taken during the course, we will also provide you with the training material which was used. This training material includes the training content, interview questions, etc.

4. Do you help in preparing for the interview?

Our trainers are working professionals who work in MNCs. They are the expert in their domain and they know exactly what an interviewer looks into a candidate. Our expert trainers apart from sharing the interview questions will also conduct mock interviews to help you prepare for the real interview.

5. Who are your trainers?

Our trainers are industry experts who work in their respective technologies day in and day out. They work in MNCs and are technology experts within their organizations.

6. What is the total batch size per course?

We maintain a strict batch size of a maximum of 5 students. We also provide exclusive one-to-one training as well. Talk to our training partner to get more details.

7. Do you provide certification for the course?

Yes, at the end of the training, we provide a certification of completion.

8. Will I be joining a new batch or being merged with another batch?

You will be added to a new batch.

9. Is fast-track training available?

Yes, we provide fast-track training as well for those who want to complete the course faster. The curriculum and the total hours required to complete the course will remain the same. However, the trainer will be spending more hours with you to complete the course.

10. Do you assist in job placement?

Our trainers are expert professionals in their organizations and they often act as the interviewer to hire new candidates. Our trainers will help you prepare your resume with industry standards. After all, they know exactly what to look for in a resume.

11. Timings for training - Regular training/weekend training?

We provide both regular and weekend training. Talk to our training partner to learn more about the timings.

12. Will you be working on a live project during training?

Yes, apart from doing the hands-on practice our trainer will also be taking a real-world project and working with you for the implementation.

13. What happens if I miss a class?

If you miss a class the content of that class will be taught to you again. With us, you might miss a class but not the content.

14. Can I attend a demo before the actual class?

Yes, absolutely! Talk to our training counselor on the phone at **+91-9513216462** or email us at **info@emexotechnologies.com** to arrange a free demo. You can also fill in the contact us form below and we will call you to discuss your training requirements.