Titbits about the trainer!!

Mr. P Nageswara Rao - **The Most familiar name in the training market!!**

An ardent tech professional with 14+ yrs of Experience in DevOps with deep-rooted career pitches in Walmart labs,NetApp etc as Senior DevOps Architect, Process planter and SME worked vibrantly for multi clientele base globally on this technology.He holds 8+ Yrs of corporate training experience in grooming & sowing the seeds of DevOps across top MNCs in India with a proven track record of running 530+ successful batches engaging 6700+ learners altogether as concrete alumni base working for top companies globally

CEO & Managing Director of :

GAMUTGURUS   **WICULTY**

OBJECTIVES OF THE TRAINING

- Application Containerization(with Docker) & Orchestration using Kubernetes.

- To Setup complete Application life-cycle(Dev, Build, Docker Image creation, Kubernetes Deployments, End-User access) practically within Kubernetes cluster.

- Learners will be working on GamutKart (Home grown) e-commerce project

- Docker Essentials (Specially for learners new to Docker)

- Containerize the GamutGurus application by creating Docker Image

- Kubernetes Installation, Deep dive into architecture & all Concepts

- Writing YAML files to create Kubernetes PODs, Deployment and Service objects.

- Setting up the load balancer for GamutKart application on GCP Cloud

- Run 10 instances of GamutGurus e-commerce application inside Kubernetes cluster

- Access the running application from anywhere in the world

Day 01 A Brisky Start

Module 01 | Docker Essentials - A Real Quick Tour

1. What is Docker and Container?
2. Container Vs Physical Vs Virtual machine
3. Creating first container. Linux Kernel concepts involved in container creation
4. Necessary Container management commands :

   [docker container ls, docker container -n2, docker rename, docker rm, docker attach, docker inspect, docker start | stop | restart]

Day 01 A Brisky Start

Module 02 | Docker Essentials - Docker images - Deep dive!

1. What is Docker Image?

2. Docker image advantages in the application deployments

3. Shipping application's code with dependencies as Docker Images

4. Setting up Docker Hub account. Publishing images into Docker Hub

5. Writing Dockerfile to create image for GamutGurus e-commerce application

6. Building Docker Image

Day 02 A PURPOSE CALL

Module 01 | Introduction to Kubernetes & Architecture & Orchestration

1. What is Kubernetes?
2. History of Kubernetes, Google Experiences
3. Kubernetes Architecture & Building Blocks
4. Docker Vs Kubernetes (Complementary technologies)
5. Why Container Orchestration tools? Application deployment challenges
6. Kubernetes as Data Centre OS
7. Container Orchestration Capabilities: Autoscaling, Zero Downtime Release, Rollback, Self-healing,
8. Rolling Updates. etc

Day 02 A purpose call

Module 02 | Kubernetes Installation, Production Setup & Architecture Components

1. Installing Kubernetes with Kubeadm

2. Production Kubernetes setup using Kubeadm

3. Setting up Kubernetes cluster (Deep-dive)

4. Kubernetes Components Deep-dive

5. Master/Controle Plane Server, Worker Nodes, Kube-API Server, Kube-Controller, Kube-Scheduler,Cluster-Store/etcd, Kubelet, Kube-Proxy, Kubectl, Container runtime]

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Day 03 PUSH THE GEAR

Module 03 | Working with Microservices

1. Development, Build and Deployment challenges in the Monolith Architecture

2. From Monolith to Microservices - project ideation

3. Monolithic Vs Microservices Architecture

4. The Docker & Kubernetes role in Microservices

Day 03 PUSH THE GEAR

Module 04 | PODs Management, Running Application On Kubernetes

1. What is POD? POD Vs Container
2. Single & Multi Container PODs & Use cases
3. POD - Horizontal scaling
4. Creating PODs - Writing YML files
5. Deploying PODs & to Run the application on Kubernetes
6. POD life-cycle management commands
   a. [kubectl get pods, kubectl get nodes, kubectl apply with various options, kubectl exec, kubectl
   b. Delete PODs etc]

Day 04   SHIFT THE HELM

Module 05 │ Kubernetes Deployments - Advanced Concepts

1. Application Autoscaling, Self-healing, Rollbacks & Rolling Updates with Zero downtime

2. Kubernetes declarative Model - Desired state & Current state

3. Replica Set objects and create Deployment object - Writing YML files

4. Kubernetes deployment management commands [kubectl get deployment, kubectl create, kubectl describe deployment.etc.]

5. Inspecting PODs and application instances

Day 04 SHIFT THE HELM

Module 06 | Kubernetes Services - Publishing application to outside world

1. Create a Service object that exposes an external IP address - Writing YML Files

2. Kubernetes Service management commands [kubectl create, kubectl get svc, kubectl describe service ..etc.]

3. Creating compute instances in the Google Cloud Platform (GCP)

4. Setting up Firewall rules & ports

5. Setting up NodePort Load balancer

6. Run 10 instances of GamutGurus e-commerce application

7. Access the running application from anywhere in the world using Service object

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Session Schedule

Day 01 : 30th May | 8AM to 10:30 AM IST

Day 02 : 31st May | 8AM to 10:30 AM IST

Day 03 : 06th June | 8AM to 10:30 AM IST

Day 04 : 07th June | 8AM to 10:30 AM IST

Our Training Sources

GAMUTGURUS

Exclusive DevOps Training Hub
3rd Floor,Pramod Reddy complex,Beside A2B
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Contact us at +91-94489 71000
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