

دوره جامع DevOps (از مقدماتی تا پیشرفته)

مروری بر دوره

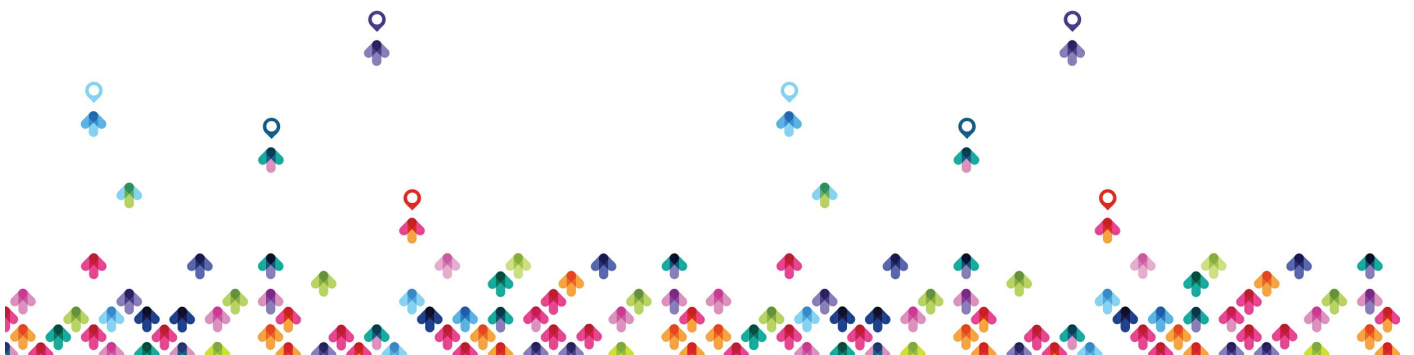
امروزه خیلی از شرکت ها در دنیا به دنبال Automation فرآیند های چرخه تولید نرم افزار هستند و نیاز بازار داخلی و خارجی به متخصصین DevOps روز به روز بیشتر می شود و سطح درآمد این دسته از افراد بسیار بالا می باشد این دوره از بحث های مقدماتی شروع شده و تا سطح پیشرفته ادامه خواهد داشت این دوره به صورت کاملا کاربردی و به صورت پروژه محور ارائه خواهد شد و شما بعد از این دوره با تمام ابزارهای DevOps آشنا خواهید شد و می توانید به راحتی از این ابزارها در پروژه های DevOps استفاده کنید.

سرفصل ها

About this course

- What is DevOps
- Q & A
- What is Continuous Integration
- What is Continuous Delivery
- DevOps Quiz
- Course Material

Prerequisites Info & Setup



- Tools Prerequisites Information
- Chocolatey for Windows
- Homebrew for MacOS
- Installing Softwares
- Tools Prerequisites for Ubuntu ۲۰
- Signups
- AWS Setup
- Outro

VM Setup

- Welcome to Virtualization
- What is Virtualization
- Introduction
- VM-Manually (Windows & MacOS Intel chip)
- VM-Automatically (Windows & MacOS Intel chip)
- Vagrant & Virtualbox
- Outro

Linux



- Introduction to Linux
- Linux Intro Questions
- Commands and File systems
- Test Basic Commands in Linux
- More Commands (mkdir, cp, mv, touch etc)
- Vim editor
- Test vim editor
- File Types
- Test File Types
- Filters
- Test Filters Commands
- Redirections
- Users & Groups
- File Permissions
- Test File Permissions
- Sudo
- Sudo Quiz
- Package Management
- Package Management Quiz
- Services
- Services Quiz
- Processes
- Processes Quiz
- Archiving



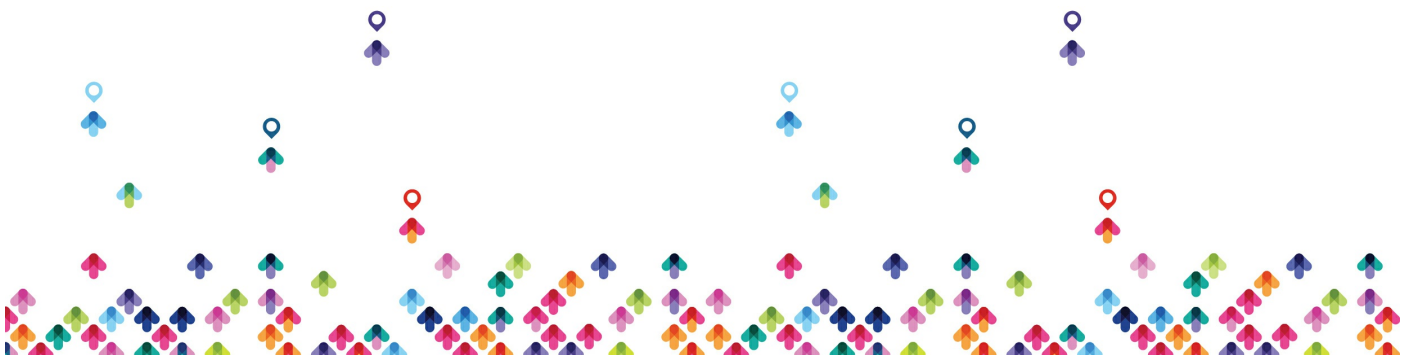
- Ubuntu commands
- Linux OS Quiz
- Linux Commands
- Outro

Vagrant & Linux Servers

- Vagrant-vm
- Vagrant IP, RAM & CPU
- Vagrant Sync Directions
- Provisioning
- Website Setup
- Wordpress Setup
- Automate Website Setup
- Automate Wordpress Setup
- Multi VM Vagrant file
- IAC Quiz

Variables, Jason & YAML

- Introduction



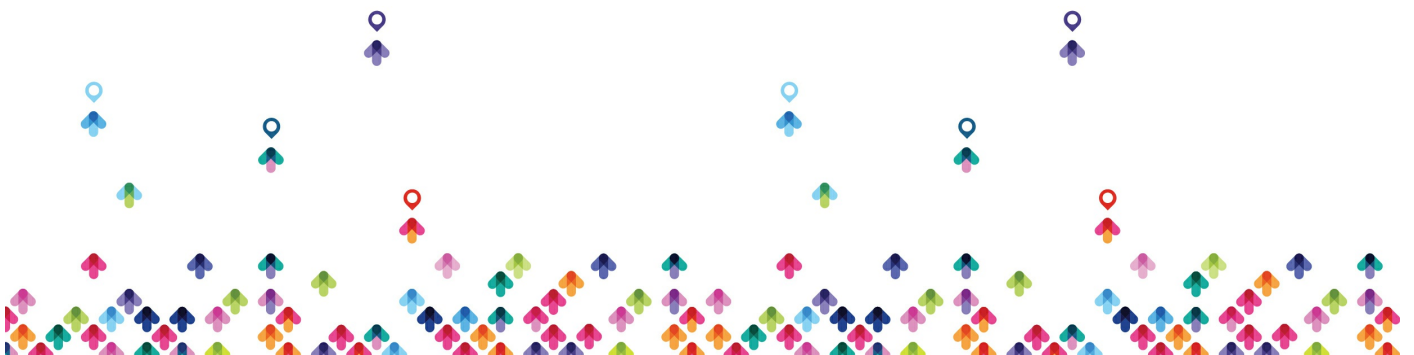
- Variables & Python DS
- JSON & YAML

VProfile Project Setup Manual & Automated

- Welcome to The Project
- Introduction
- VM Setup
- DB, Cache & Queue Setup
- App setup
- Nginx Setup
- Validate
- Automated - Introduction
- Automated - Execution
- Vprofile Project Quiz

Networking

- ISO
- Understanding Networks & IP
- Protocols, ports etc



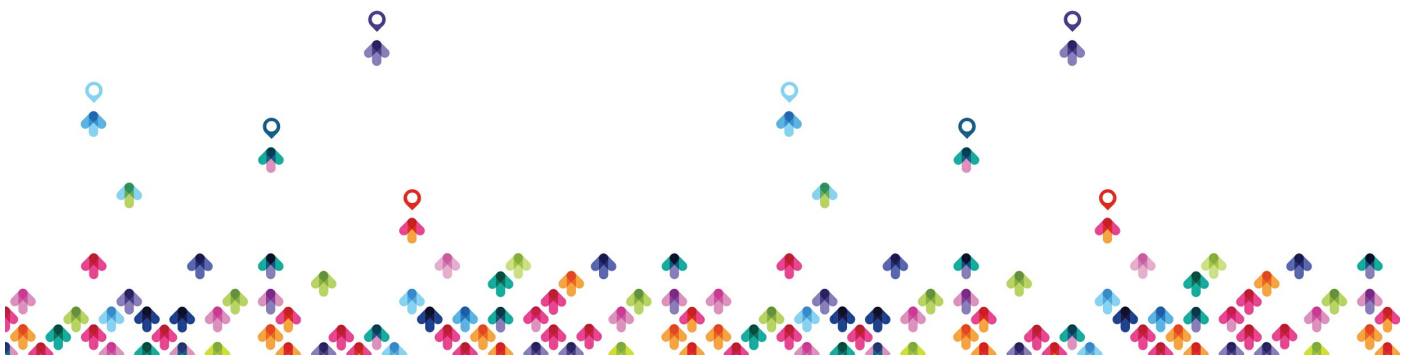
- Networking Commands
- Networking Quiz

Introducing Containers

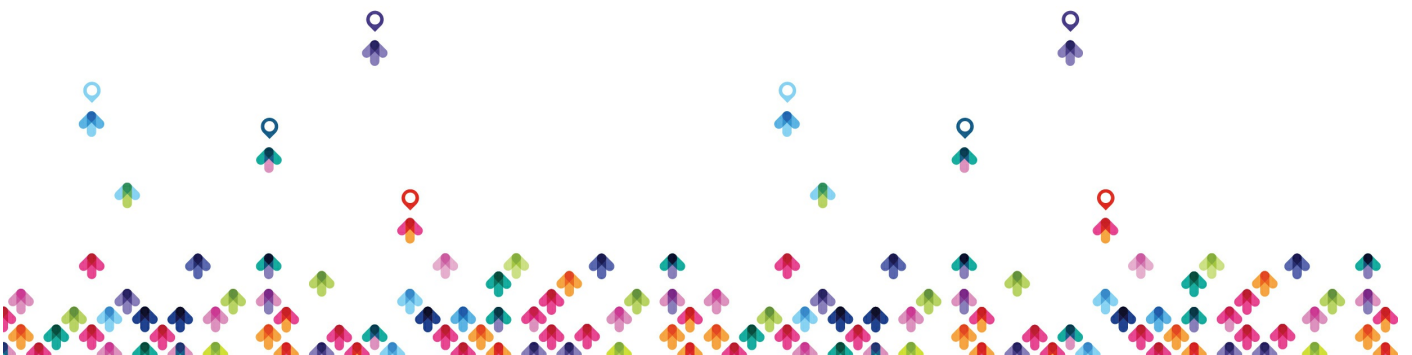
- What are Containers
- Container Quiz
- What is Docker
- Docker Intro Quiz
- Hands on Docker Containers
- Docker Quiz
- Vprofile Project on Containers
- Microservices
- Microservices Project

Bash Scripting

- Bash Scripts
- Introduction
- VM Setup
- First Script



- Sample Script
- ChatGPT
- Variables
- Variables Quiz
- Command Line Arguments
- System Variables
- Arguments Quiz
- Qoutes
- Commands Substitution
- Qoute Quiz
- Exporting Variables
- Variable Quiz
- User Input
- Decision Making Part ۱
- Decision Making Part ۲
- Conditions Quiz
- Monitoring Script
- Loops
- For Loop Quiz
- While Loops
- Remote Command Execution
- SSH Key Exchange
- Finale Part ۱
- Finale Part ۲



AWS Part ۱

- What is Cloud Computing
- Introduction
- Ec۲ Introduction
- Ec۲ Quick Start
- More in Ec۲ Part ۱
- More in Ec۲ Part ۲
- AWS CLI
- EBS
- EBS Snapshots
- ELB Introduction
- ELB Hands On
- Cloudwatch Introduction
- Cloudwatch Hands On
- EFS
- AutoScaling Group Introduction
- AutoScaling Group Hands On
- S۳
- RDS

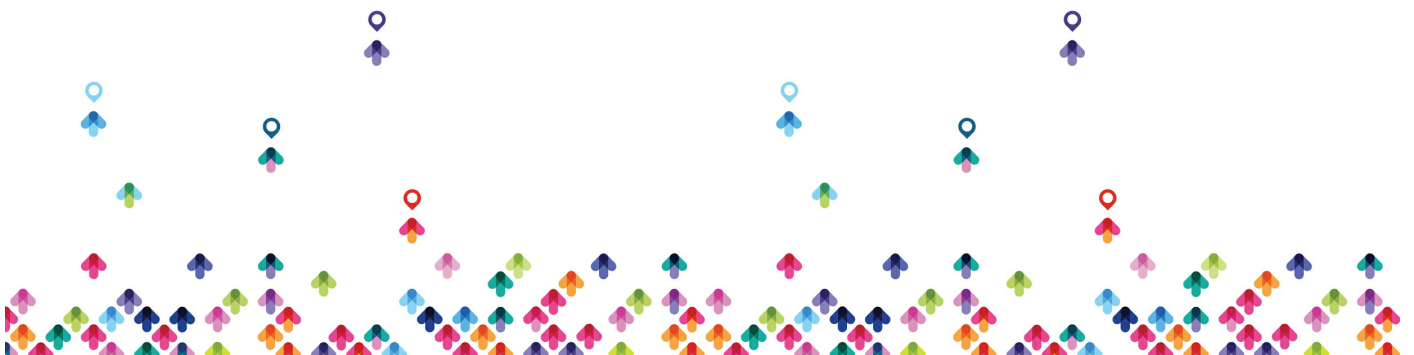
AWS Cloud For Project Setup | Lift & Shift



- Introduction
- Security Groups & Keypairs
- EC۲ Instances
- Build & Deploy Artifacts
- Load Balancer & DNS
- AutoScaling Group
- Validate & Summerize

Re-Architecting Webapp on AWS Cloud [PAAS & SAAS]

- Introduction
- Security Group & Keypairs
- RDS
- Elastic Cache
- Amazon MQ
- DB Initialization
- Beanstalk
- Update on Security Group & ELB
- Build & Deploy Artifact
- Clout front
- Validate and Summarize



GIT

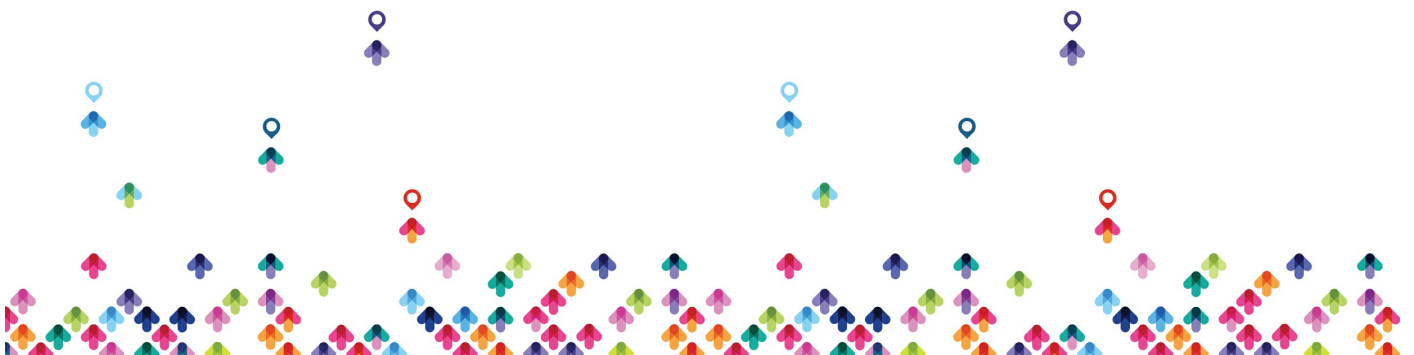
- Introduction
- Versioning
- Branches & More
- Rollback
- Git SSH Login
- Git Commands

Maven

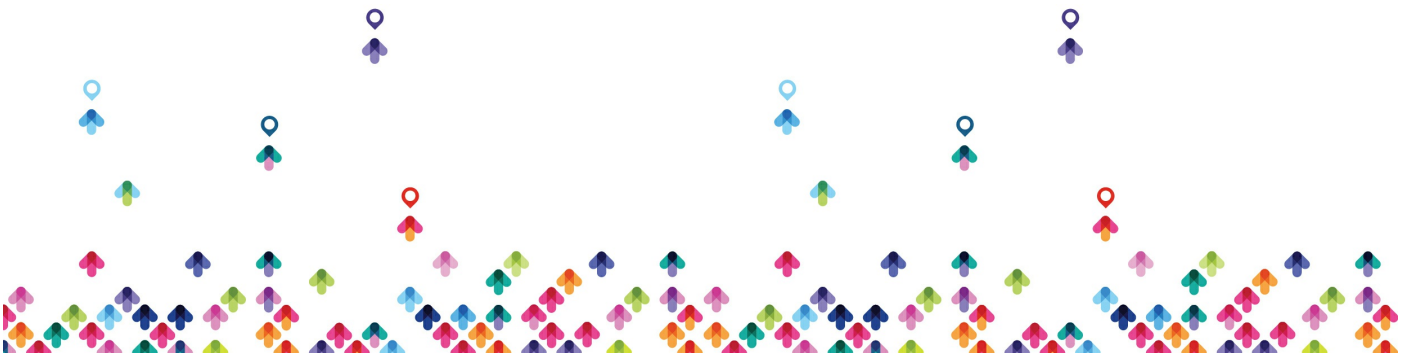
- Introduction
- Maven Hands-on

Continuous Integration with Jenkins

- Introduction
- Installation
- Freestyle Vs Pipeline as a Code
- Installing tools in Jenkins



- First Job
- First Build Job
- Plugins, Versioning, & More
- Flow of Continuous Integration Pipeline
- Steps for Continuous Integration Pipeline
- Jenkins, Nexus & Sonarqube Setup
- Plugins for CI
- Pipeline as a Code Introduction
- Code Analysis
- Code Analysis Demonstration
- Quality Gates
- Software Repositories Intro (Nexus)
- Nexus PAAC Demo
- Notification, Slack
- CI for Docker | Intro
- Docker PAAC Prereqs info
- Docker PAAC Demo
- Docker CICD Intro
- Docker CICD Code
- AWS ECS Setup
- Docker CICD Demonstrations
- Cleanup
- Build Triggers Intro
- Build Triggers Demo
- Jenkins Master & Slave
- Authentication & Authorization



Python

- Introduction
- Python on Linux, Versions & Indentation
- Quotes and Comments
- Variables
- Print Format
- Slicing
- Operators
- Conditions
- Loops
- Break & Continues
- Built-in Functions or Methods
- Functions part-۱
- Functions part-۲
- Modules
- OS Tasks
- Python Fabric
- Pyscripts
- Python Scripts

Ansible



- Introduction
- Setup Ansible & Infra
- Inventory & Ping Module
- Inventory Part۲
- YAML & JASON
- Ad Hoc Commands
- Playbook & Modules
- Modules - Find, Use, Troubleshoot & Repeat
- Ansible Configuration
- Variables & Debug
- Group & Host Variables
- Fact Variables
- Decision Making
- Loops
- File, copy & template modules
- Handlers
- Roles
- Ansible for AWS
- Vprofile code

AWS Part-۲



- VPC Introduction
- VPC Design & Components
- VPC Setup Details
- Default VPC
- Create VPC
- Subnets
- Internet Gateways
- Route Tables
- NAT Gateway
- Bastion Host
- Website in VPC
- Peering
- Ecr Logs
- Links
- S3 policy

AW CI/CD Projec

- Introduction
- Beanstalk
- RDS & App Setup on Beanstalk
- Code Commit
- Code Build
- Build, Deploy & Code Pipeline



Docker

- Introduction
- Docker Setup
- Docker commands and concepts
- Docker Logs
- Docker volumes
- Building Images
- Entrypoint and CMD
- Multi Stage Dockerfile
-
- **Containerization**

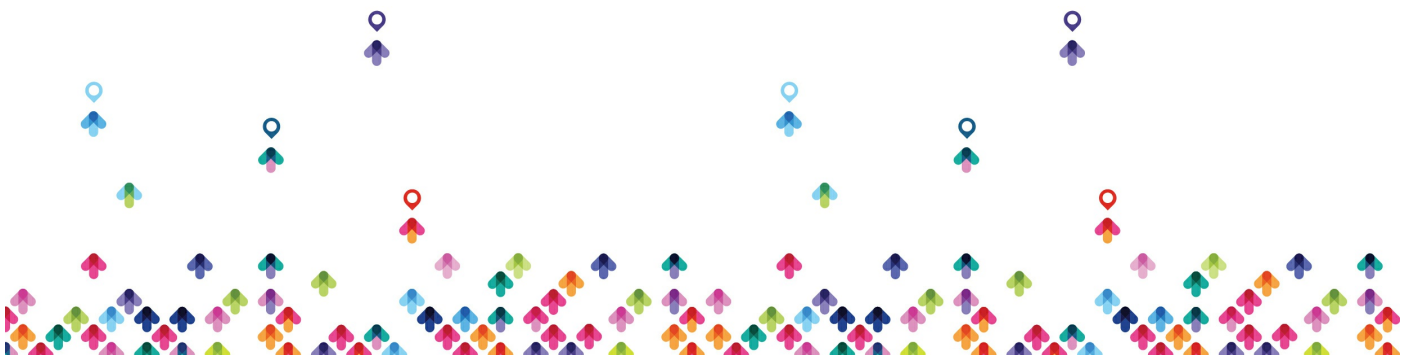
- Introduction
- Overview of Base Image
- Dockerhub Setup
- Setup Docker Engine
- Dockerhub & Dockerfile References
- App Image Dockerfile
- DB Image Dockerfile
- Web Image Dockerfile
- Docker Compose
- Build and Run
- Summarize



- Containerizing Microservice Project
- Build & Run Microservice App

Kubernetes

- Introduction
- Minikube for K8s Setup
- Kops for K8s Setup
- Objects and Documentation
- Kube Config
- Namespace
- Pods
- Different levels logging
- Service
- Replica Set
- Deployment
- Command and Argumets
- Volumes
- Config Map
- Ingress
- Kubectl CLI & Cheatsheet
- Extras
- Lens
- Vproappod

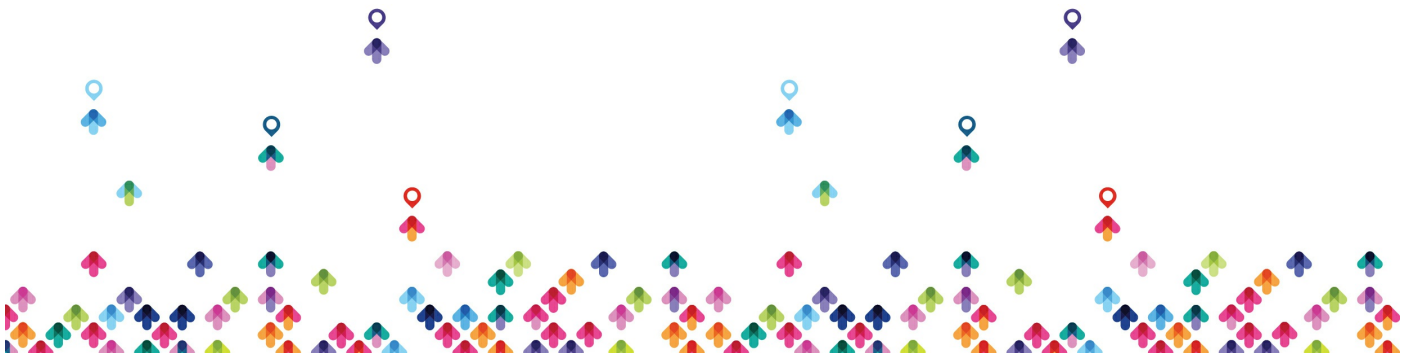


- Vproapp-nodeport
- Vproapp-loadbalancer
- Vproapp-repl-controller

App Deployment on Kubernetes Cluster

- Introduction
- Spin K8s Cluster
- Volume Preqs for DB POD
- Source Code Overview
- Kube secret for passwords
- DB deployment Definition
- DB Service Definition
- Memcached Deployment & Service
- RabbitMQ Deployment & Service
- Tomcat Deployment & Service & Init container
- Provision Stack on K8s Cluster
- URL for Website & Wrap up

Terraform Tutorial

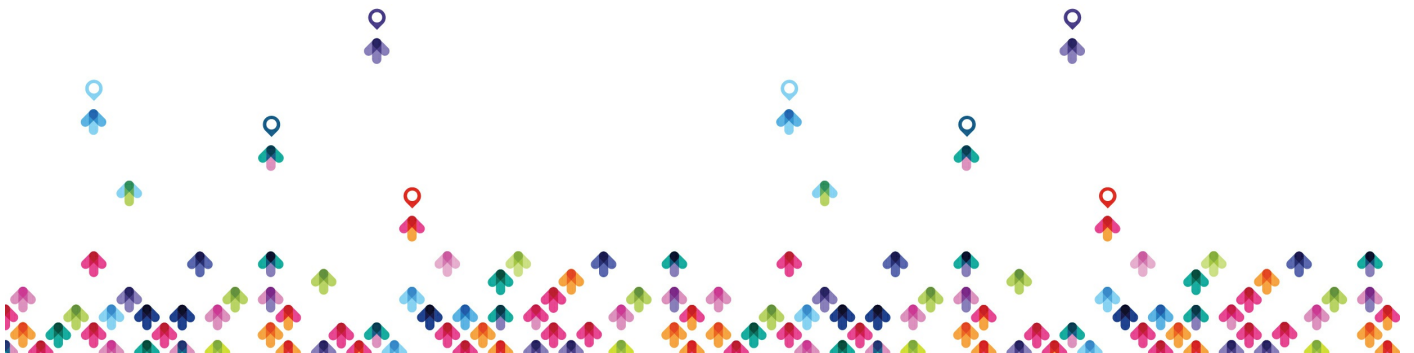


- Introduction and Exercise ۱
- Exercise ۲ - Variables
- Exercise ۳ - Provisioners
- Exercise ۴ - Output
- Exercise ۵ - Backend
- Exercise ۶ - Multi Resource
- AWS Elastic Kubernetes Service

GitOps Project

- GitOps Introduction
- Project Architecture
- Prepare Github Repo
- Github Secrets
- Terraform Code
- Staging Workflow for Terraform code
- Main Workflow for Terraform code
- Workflow for Vprofile app code
- Docker Build & Publish
- Deploy to EKS
- Clean up

CICD for Docker Kubernetes Using Jenkins



- CICD Introduction
- Jenkins, Sonar & Docker Integration
- Plugins, Kubernetes Cluster & Helm
- Helm Charts & git repo Setup
- Writing Pipeline Code
- Execution, troubleshooting & Summarizing

CloudFormation Tutorial

Introduction
First Example
Intrinsic Functions
Change Set
More Intrinsic Functions
Multiple Resources
Mappings And Pseudo Parameters
Parameters
Outputs
Init



مخاطبان دوره

کارشناسان شبکه

متخصصین برنامه نویسی

پیش نیازها

دوره نتورک پلاس

