WELCOME TO

@DevOpsBySanthosh

DEVops-Syllabus

Module 1: LINUX

- ✓ Linux introduction
- ✓ Flavors on linux
- ✓ Linux history
- ✓ Linux advantages
- ✓ System information
- ✓ Hardware information
- ✓ File commands
- ✓ Vim editor
- ✓ Users & Groups
- ✓ File permissions
- ✓ Networking
- ✓ Compression/archive
- ✓ Disk usage
- ✓ Package installation
- ✓ Scripting
- ✓ SED filters
- ✓ GREP filters
- ✓ Some additional commands
- ✓ Assignment

Module 2: AWS Services

- ✓ Elastic Compute Cloud (EC2)
- ✓ Virtual Private Cloud (VPC)
- ✓ Simple storage service (S3)
- ✓ Elastic Block Storage (EBS)
- ✓ Identity and Access Management (IAM)
- ✓ Relational Database Service (RDS)
- ✓ Elastic Load Balancer (ELB)
- ✓ Auto Scaling Group (ASG)
- ✓ Elastic File System (EFS)
- ✓ Elastic Container Registry (ECR)
- ✓ Simple Notification Service (SNS)
- ✓ Code build
- ✓ Code commit
- ✓ Code deploy
- ✓ Aws code pipeline

Module 3: SCM Tools - GIT

- ✓ What is VCS
- ✓ VCS history
- ✓ SCCM
- ✓ Revision control system
- ✓ Subversion
- ✓ Concurrent versions system
- ✓ Why Git
- ✓ Git stages
- ✓ Working directory
- ✓ Staging area
- ✓ Repository (Local, Central, Remote)
- ✓ Git installation
- ✓ Git lifecycle
- ✓ Git logs
- ✓ Git push
- ✓ Git pull
- ✓ Git Cloning
- ✓ Git branch
- ✓ Git merge
- ✓ Git Stash
- ✓ Git tags
- ✓ Git cherry pick
- ✓ Git revert
- ✓ Git Merge
- ✓ Merge Conflicts
- ✓ Configuration of User
- ✓ Ignoring content
- ✓ Branching strategies

Module 4: GITHUB

- ✓ Git repos (private & public)
- ✓ Integrating repos
- ✓ Forking
- ✓ Github fileadd
- ✓ Tokens
- ✓ Compare & pull request
- ✓ Renaming rep

- ✓ Danger zone options
- ✓ Making public repo as private
- ✓ Ownership transfer
- ✓ Archiving repos
- ✓ Deleting repos
- ✓ Accessing the private repos
- ✓ Advantages & disadvantages
- ✓ Difference between git and othertools
- ✓ Interview questions

Module 5: BIT BUCKET

- ✓ Bit bucket repos (private & public)
- ✓ Bit bucket projects
- ✓ Tokens
- ✓ Push
- ✓ Pull
- ✓ Cloning
- ✓ Branch
- ✓ Merge

Module 6: Build Tools - MAVEN

- ✓ Introduction
- ✓ Maven objectives
- ✓ Project Information
- ✓ Features
- ✓ Download requirements
- ✓ Plugins
- ✓ Maven Goals
- ✓ What maven does
- ✓ What is build tool?
- ✓ Pom.xml file
- ✓ Requirements for build
- ✓ Maven architecture
- ✓ Maven build life cycle
- ✓ Maven Directory structure
- ✓ Generating jar file
- ✓ Problems without maven
- ✓ Maven vs Ant
- ✓ Interview questions

Module 7: Integration Tool – JENKINS

- ✓ Introduction
- ✓ Workflow
- ✓ Continuous integration
- ✓ Continuous delivery
- ✓ Continuous deployment
- ✓ Jenkins setup
- ✓ Jenkins Setup requirements
- ✓ Java installation
- ✓ Git integration
- ✓ Maven integration
- ✓ Jobs types in jenkins
- ✓ Free style job
- ✓ Pipeline
- ✓ Maven job, task
- ✓ Parameter building
- ✓ Choice parameter
- ✓ File parameter
- ✓ String parameter
- ✓ Multi-string parameter
- ✓ Credentials parameter
- ✓ Branch building
- ✓ Schedule project
- ✓ Corn jobs
- ✓ Poll SCM
- ✓ Webhooks
- ✓ Linked projects
- ✓ Up stream
- ✓ Down stream
- ✓ Build pipeline view
- ✓ Master - slave architecture
- ✓ Master - slave setup
- ✓ Environment variables
- ✓ Local variable
- ✓ Global variable
- ✓ Disabling jobs
- ✓ Renaming jobs
- ✓ Build pipeline view
- ✓ Shell execute
- ✓ Build triggers

- ✓ Authentication for build trigger
- ✓ Pipelines
- ✓ Scripted pipelines
- ✓ Declarative pipelines
- ✓ Pipeline stages
- ✓ Pipeline syntax
- ✓ Hello world pipeline
- ✓ Staged pipeline
- ✓ Multi-staged pipeline
- ✓ Pipeline as a code
- ✓ Multiple commands on pipeline
- ✓ Paac variables
- ✓ Paac parameters
- ✓ Paac input parameter
- ✓ Paac postbuild
- ✓ Paac input
- ✓ Pipeline through build pipeline
- ✓ Pipeline post-build
- ✓ Plugin management
- ✓ Console output
- ✓ List view
- ✓ Custom view
- ✓ Build history
- ✓ Cron syntax generator
- ✓ Editing build info
- ✓ Agent setup
- ✓ User management
- ✓ Adding Users
- ✓ Assigning Roles
- ✓ Managing Roles
- ✓ Blue ocean introduction
- ✓ Advantages
- ✓ Jenkins alternatives
- ✓ Interview question

Module 8: Containerization Tool - DOCKER

- ✓ Microservices Introduction
  - ✓ Difference between monlithic &microservices
- ✓ Micro services advantages
- ✓ Micro services limitations
- ✓ Virtualization Intro
- ✓ Docker vs VMS vs Servers
- ✓ Before docker vs After docker
- ✓ Docker Introduction
- ✓ Understanding docker
- ✓ Docker architecture
- ✓ Docker client
- ✓ Docker server
- ✓ Docker daemon
- ✓ Docker objects
- ✓ Docker basic commands
- ✓ Stop vs kill
- ✓ Run vs CMD vs Entrypoint
- ✓ Add vs Copy
- ✓ Run vs Pull
- ✓ Docker exec
- ✓ Container limits
- ✓ Docker images
- ✓ Docker containers
- ✓ Docker volumes
- ✓ Working with containers
- ✓ Build image from container
- ✓ Creating custom images
- ✓ Ways of container creation
- ✓ Docker file
- ✓ Docker file components
- ✓ Docker file creation
- ✓ Docker volumes
- ✓ Uses of volumes
- ✓ Creating volumes
- ✓ Creating volumes by using commands
- ✓ Volumes (container - container)
- ✓ Volumes (host - container)
- ✓ Creating volume from file
- ✓ Creating volume from Commands
- ✓ Volume Mounting
- ✓ Volume Modifiying
- ✓ Docker port mapping

- ✓ Docker multistage build
- ✓ Creating jenkins by docker
- ✓ Docker Registry Types
  - ✓ Cloud Based Registry vs Localregistry
- ✓ Docker Login
- ✓ Docker hub account creation
- ✓ Image Pushing to Registry
- ✓ Docker swarm
- ✓ Docker swarm architecture
- ✓ Docker swarm components
- ✓ Docker swarm manager
- ✓ Docke9r swarm worker
- ✓ Docker swarm service
- ✓ Docker Portainer
- ✓ Docker compose
- ✓ Docker compose advantages
- ✓ Docker compose installation
- ✓ Docker compose file
- ✓ Docker compose file in json
- ✓ Docker compose file in yaml
- ✓ Docker compose single service
- ✓ Docker compose Multiple services
- ✓ Docker compose file commands
- ✓ Docker compose scale
- ✓ Docker stack
- ✓ Portainer introduction
- ✓ Portainer use cases
- ✓ Portainer setup
- ✓ Working with portainer
- ✓ Memory management
- ✓ ECS taks & Services
- ✓ Load balnacers
- ✓ Hosting an application
- ✓ Docker Network
- ✓ Why to use docker networks
- ✓ Types of networks
- ✓ Interview questions

Module 9: KUBERNETES

- ✓ History
- ✓ Container Orchestration
- ✓ Kubernetes Introduction
- ✓ Architecture
- ✓ Master components
- ✓ Node components
- ✓ Working with k8s
- ✓ Role of master
- ✓ Components of control plane
- ✓ Kube-API server
- ✓ ETDC
- ✓ Features
- ✓ Kube-scheduler
- ✓ Control manager
- ✓ Node components
- ✓ Kubelet
- ✓ Container engine
- ✓ Kube-proxy
- ✓ Pod
- ✓ Pod limitations
- ✓ Pod multi container pod
- ✓ Minikube Intro
- ✓ Single Node Cluster
- ✓ Replicaset
- ✓ Drawback of replica set
- ✓ Daemonset
- ✓ Drawback of daemon set
- ✓ Deployments
- ✓ Labels & Selectors
- ✓ Rolling Updates
- ✓ Scaling pods
- ✓ Types of scaling
- ✓ Deployment Scaling
- ✓ Pausing & Unpausing rolling deployment
- ✓ Proportinal scaling
- ✓ HPA
- ✓ Kops
- ✓ Kops Advantages
- ✓ Kops Installation
- ✓ Kubectl Installation
- ✓ Cluster Creation using kops
- ✓ Cluster scaling

- ✓ Service in Kubernetes
- ✓ Types of services
- ✓ Cluster IP
- ✓ Node port
- ✓ Load balancer
- ✓ Ingress
- ✓ Nodeport va Clusterip vs LB
- ✓ Kubernetes volumes
- ✓ Empty DIR
- ✓ Hostport
- ✓ Persistent Volume
- ✓ Persistent Volume claim
- ✓ What is probes
- ✓ Use cases of probes
- ✓ Readiness Probe
- ✓ Liveness Probe
- ✓ Startup Probe
- ✓ Readiness vs Liveness vs Startup
- ✓ Config Maps
- ✓ Secrets
- ✓ What is RBAC
- ✓ Namespaces
- ✓ Resource Quotas
- ✓ Helm
- ✓ Statefull Application
- ✓ Stateless Application
- ✓ Statefull vs Stateless Application
- ✓ Working with stateful applications
- ✓ Working with stateless applications
- ✓ Prometheus & Grafana
- ✓ Interview Questions

Module 10: Monitoring: Datadog

- ✓ What is Datadog
- ✓ How to setup datadog
- ✓ How to monitor app servers
- ✓ Monitor Jenkins Pipelines
- ✓ Monitor Containers
- ✓ Export logs to datadog

Module 11: Configuration Management tool–ANSIBLE

- ✓ Ansible Introduction
- ✓ Ansible usecases
- ✓ Ansible History
- ✓ Ansible Architecture
- ✓ Ansible inventory host pattern
- ✓ Ansible Execution types
- ✓ Ad-hoc commands
- ✓ Working with adhoc
- ✓ Ansible modules introduction
- ✓ Working with ansible modules
- ✓ Ansible playbooks
- ✓ Yaml Introduction
- ✓ Yaml Indentation
- ✓ Commenting Sections
- ✓ Ansible variables
- ✓ Ansible handlers
- ✓ Ansible loops
- ✓ Ansible conditions
- ✓ Ansible vault
- ✓ Ansible roles
- ✓ Ansible tags
- ✓ Ansible dry run
- ✓ Ansible pip
- ✓ Ansible userinfo
- ✓ Ansible setup modules
- ✓ Ansible debug module
- ✓ Ansible raw module
- ✓ Ansible command module
- ✓ Ansible copy module
- ✓ Ansible Shell
- ✓ Creating local resources
- ✓ Static website using playbook
- ✓ Advantages & Disadvantages
- ✓ Ansible vs Chef vs Puppet vs Salt stack
- ✓ Interview questions

Module 12: Infra as a code tool– TERRAFORM

- ✓ Introduction
- ✓ History
- ✓ Advantages & dis advantages
- ✓ Terraform setup & installation
- ✓ Terrafrom init
- ✓ Terraform plan
- ✓ Terraform apply
- ✓ Terraform destroy
- ✓ Creating a main.tf
- ✓ Role based authentication
- ✓ S3 backend setup
- ✓ Terraform variables
- ✓ String
- ✓ Number
- ✓ Boolean
- ✓ List
- ✓ Terraform loops
- ✓ Terraform workspaces
- ✓ Terraform locals
- ✓ Terraform outputs
- ✓ Creating VPC
- ✓ Creating EC2
- ✓ Creating S3 bucket
- ✓ Creating security groups
- ✓ Creating subnets
- ✓ Creating EBS
- ✓ Creating EFS
- ✓ Terraform multiple tfvar files
- ✓ Terraform CLI
- ✓ Dynamic block

Module 13: CODE & ARTIFACT STORAGE

- ✓ NEXUS
- ✓ Sonqrqube

14: INTEGRATIONS

- ✓ Git integrated with jenkins
- ✓ Maven integrated with jenkins
- ✓ Ansible integrated with jenkins
- ✓ Docker integrated with jenkins
- ✓ Terraform integrated with jenkins
- ✓ S3 integrated with jenkins
- ✓ Nexus integrated with jenkins
- ✓ Sonar integration with jenkins
- ✓ Slack integration with jenkins
- ✓ Splunk integration with jenkins

Module 15: REAL TIME PROJECTS:

- ✓ Automation Deployment
- ✓ Microservices Project
- ✓ Monolithic Project
- ✓ CI/CD Using Ansible
- ✓ CI/CD using AWS Code Pipeline
- ✓ Deploy 3 tier application using dockercompose

THANK YOU