DevOpsTraining

DevOpsOverview

- Devopsroleshaveincreasedfrom 10%to45%in2018andNearly70%of thesystem administratorsare replaced with roles in devops.
- InshortDevopsisdefinitelyapromisingcareerforallIT professionals.Innextfewyears90%of thecompanies will adopt devops culture.
- InIndiaaveragesalaryfor adevopsprofessionalsisRs13,34,890 peryear.
  Devops professionals have Hughdemandandpotentialin near future.Tobecomeadevops professional you shouldlearnfewautomationtools likeChef,Puppet,Ansible,JenkinsandfewotherveryusefultoolslikeGIT, Nagios, Dockers.
- Apponixisdedicatedtoprovidebestlearningexperienceforitsstudentssince6years.
  WeofferthebestDevOps traininginBangalore, weareproudtosaywearethetopDevOpstrainingproviderin Bangalore, we make sure all our students will get good training experience.
- AllourDevOpsinstructorsareworkinginMNCandhavemin7yearsofexperience.
- ApponixDevOpsTrainingcourseisdesignedbyindustryexpertsandtocoverlatestmarketcloud requirements.
- DevOpsCertificationTrainingCoursewhichwillprepareyouforacareer inaDevOpsenvironment,thefast- growing field that bridges the gap between software developers andoperations.
- Youwill becomeanexpertindeployment,automationofconfigurationmanagementtoolssuchasGIT,Docker, Jenkins, Puppet and Nagios.
- DevOpsTrainingfromApponixwill helpyougainskillsontoolswhichare usedindevopsenvironment.

In DevOps training course you will be equipped with latest technologies used in the DevOps environment The topicscoveredareveryup todateandverymuchrelevanttothedevops,Theskills yougain willbeveryhelpful to work in either production support team, projects team or BAU Team.

DevOpsTrainingcourseobjectives:

- In-depthknowledgeonContinuousDevelopment,ContinuousIntegration,andContinuousTestingby performing hands-on on GIT, Jenkins and Selenium
- ComprehensiveknowledgeonConfigurationManagement,andContinuousDeploymentusingPuppet,Ansible Working on Continuous Deployment stage by performing hands-on on popular tools like Docker and Kubernetes
- TheexposuretothestageofcontinuousmonitoringusingNagios
- Theabilitytoautomateallaspectsof amoderncodedeliveryanddeploymentpipeline using:
  Source code management tools

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Build&monitoringtools Test

automation tools

ContainerizationthroughDocker

Configurationmanagement tools

Whychoose ApponixasaTopDevOpsTraininginstituteinBangalore?

- Apponixhasexcellenttrainersfor Devopswithrichexperienceinindustry.
- 100%studentsatisfactionrateinDevOpstraining
- Morethan1000studentscompletedtrainingindevopssince2013
- ExcellentLabfacilityforDevOpsTraining
- Wehaveexcellentratingtill date,overall4.9Ratingin Google&Facebook.

Course Duration: 40 Hours

DevOpsTrainingCourseContent

1:DevopsLabSetuptoolsforLinuxandwindowsEnvironment

- o GitBashinstallationandGithubaccountsetup
- o Tomcatinstallation andConfiguration
- o JfrogArtifactoryinstallationandConfiguration
- o MavenInstallationandConfiguration
- o JenkinsinstallationandConfiguration
- o AnsibleInstallationandConfiguration
- o SonarqubeinstallationandConfiguration
- o DockerInstallation andconfiguration
- o Javainstallationand Configuration
- o EnvironmentalvariablesetupforbothwindowsandLinux

2:IntroductiontoDevopsandDevsecops

- o Introductionto DevOps
- o WhatisDevOps?
- o SDLCmodels,Lean,ITIL,Agile
- o WhyDevOps?
- o HistoryofDevOps
- o DevOpsStakeholders
- o DevOpsGoals
- o Important terminology
- o DevOpsperspective

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- o DevOpsandAgile
- o DevOpsTools
- o Configurationmanagement
- o ContinuousIntegrationandDeployment

3:IntroductiontoSDLC,Softwaretesting,Agile:Softwaretestinglifecycle

- o WorkingwithBlockboxtesting
- o WorkingwithWhiteboxtesting
- o WorkingGreyboxtesting
- o WorkingwithFunctiontesting
- o WorkingwithRegressingtesting,smoketesting,Systemtesting,Integrationtestingetc.

4:AgileMethodologies:

- o ProcessflowofScrum Methodologies
- o Projectplanning,scrumtesting,sprintPlanningandReleasemanagement
- o Analysis
- o Design,Executionandwrappingclosure

5:LINUXAdministration

- o IntroductiontoLinuxFamilies(ex:Redhat&DebianFamily)
- o workingwithAPTandYUMand Dnf
- o WorkingwithAWKandSEDcommands

6:InstallationandInitialization:

- o Installation,PackageSelection
- o AnatomyofaKickstartFile,Commandline
- o IntroductiontoBashShell
- o SystemInitialization,StartingtheBootProcess:GRUB.

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7: Boot and Package Management:

- Securing single-user mode (sulogin)
- Shutting down and rebooting the system
- RPM Package Manager, Installing and Removing Software, Updating a Kernel RPM
- Yum Command set, Install packages by using yum.
- Apt-get command set, Apt-cache package management

8: User Administration:

- Understanding different types of groups and creation of groups
- Creation of users in different groups
- Understanding Passwd, Shadow Files
- Understanding passwd aging
- Creation of quotas for users, groups and filesystems
- Understanding users security files
- The different commands for Monitoring the users
- TROUBLESHOOTING
- Automation of jobs – Cron, at
- Working with commands tar, find, grep, etc.

9: Runlevels:

- Understanding the different types of run-levels
- Understanding different types of shutdown commands
- Understanding run control scripts
- Understanding the different types

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VersionControl/SCM(Git)

1:IntroductiontoGit

- o OverviewofSVN,GIT,Clearcase,perforce&Comparision
- o IntroductionofGit
- o SelectingGitClient
- o Creating Repository
- o Working withTag
- o CreatingandMergingBranches
- o ExecutingGitCommands
- o GitLogs,Gitstash,Gitrebase
- o Mergeconflictissuesresolving
- o Gitpull,clone,fetch

AnsibleModules

1:IntroductiontoAnsible

- o WhatisAnsible
- o ChangeManagement
- o ProvisioningwithAnsible
- o BenefitsofusingAnsible

2:AnsibleBuildingblocksandProcessflow

- o IntroductiontoAnsibleAnatomy
- o Ansible Requirements Specification
- o OverviewofAnsibleComponents
- o OverviewofAnsibleStrategy

3:AnsiblePlaybookModulesanddirectorystructure

- o IntroductiontoAnsiblePlaybook
- o IntroductiontoAnsibleModules
- o Lab(Docs,setup,service,yum ...etc)

4:Variable,Factsandjinja2templates

- o WorkingwithAnsibleVariable
- o WorkingwithFacts
- o WorkingwithJinja2Template

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5:PlayandPlaybooks

- o OverviewofAnsiblePlaybooks
- o PlaybookLanguageExample
- o WorkingonAnsibleHandlers
- o ExecutingaPlaybook.

DockerModules

1:GettingStartedwithDocker

- o IntroductiontoDocker.
- o What'sunderthehood-Namespaces,CgroupsandOverlayFS
- o Understanding Virtualization
- o VirtualizationvsContainer

2:DockerInstallation

- o CreatingaVirtualDockerHost(CentOS)byusingVagrant
- o InstallingDockeronCentOS
- o IntroductiontoDockernamespaces

3:DockerImages

- o IntroductiontoDockerImages
- o BuildingaDockerImagewithaDockerfile
- o SharingDatainYourDockerHostwithContainers
- o SharingDataBetweenContainers
- o CopyingDatatoandfromContainers
- o CreatoingDockerHubAccount.
- o BuildingImagesusingDockerFile.
- o PullandPushImagesFrom/ToDocker Hub.

4:DockerNetworking

- o IntroductiontoDockerNetworking
- o FindingtheIPAddressofaContainer
- o SettingUpaCustomBridgeNetworkforDocker

5:ContainerOperations

- PortMappingforDocker
- Creating,Starting,Stopping, Renaming,RemovingContainers
- InspactingContainers
- LimitingRrsorucesMemoryandCPU
- PrioritizingCPUUtilization

6:DockerCompose

- IntroductiontoDockercompose
- CreatingDockercomposefile
- ExecutingDockerCompose file

JenkinsModules

1:IntroductiontoContinuousIntegrationandJenkins-CI/CD

- Whatis ContinuousIntegration
- JenkinsContinuousIntegration
- WhatisContinuousDeployment
- JenkinsVsJenkinsEnterprise

2:JenkinsInstallation

- DownloadingandInstallingJenkinsusingTomCat
- CreatingJenkinsasaService.
- StartingandStoppingJenkins

3:ConfigureJenkinsandUserManagement.

- SecureJenkins
- Createanewuser
- GeneratesshkeyforJenkinsuser
- Plug-inmanagement

4:Jenkinsjobs setup

- SettingupaJenkinsjob(Freestyle,Pipeline,maven,MSBuild,Pybuild)
- Jenkinsparametrizedjobssetup(choiceparams,booleanparamsetc)
- Emailnotificationjobs
- Paralleljobsconfiguration
- nodes(slaves)configuration

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5:JenkinsIntegration

- o GitintegrationwithJenkins
- o MavenIntegrationwithjenkins
- o ansible,artifactoryintegration
- o Dockerandscanningtoolintegration
- o AWSandcodereviewtool

6:JenkinsUseradministration

- o Rolebasedadministration
- o Projectbasedadministration
- o Metricbasedadministration
- o Slavesconfiguration
- o Usersandgroupscreation

MavenModules

1:BuildTollsoverview

- o WhatismavenandMsbuild,Pybuild,gradleandant
- o MavenEvolution
- o MavenObjectiveandEnvironmentsetup
- o Maven projectcreation
- o WhatisPOM.xmlandsuperPOM
- o MavenbuildlifecyclecreationandDefaultBuildlifecycle

2:CustomizedProjectandpluginsetup

- o MavenProjectsetup
- o Mavenplugindownloadandsetup
- o MavenBuildautomationwithCIservice

3:MavenRepositoriesandGAVsnapshots.

- o WhatisGAVandprojectandSnapshots,version
- o MavenWebapplicationcreationwithpom.xml
- o WhatisMavenrepository
- o Localrepo
- o CentralrepoandRemoterepo
- o MavenDependenciesandplugin

CompleteguidetoKubernetes

1:IntroductiontoKubernetes

- o TheneedforaContainerOrchestrationEngine
- o BattlesofCOEs,whichonetochoose
- o KeyFeaturesofaCOE.
- o WhatmakesKubernetesthedefactoCOEchoice.
- o NegativesofusingKubernetes

2:KeyConceptsofKubernetes

- o Namespaces
- o Pods
- o ReplicaSetsandDeployments
- o ServiceDiscoveryandLoadBalancing
- o Configmaps,Storage,Network,RBAC
- o Statefulsets,CronsandJobs
- o KubernetesArchitecture

3:SettingupEnvironment

- o ProvisioningandconfiguringonAWS
- o InitialiseClusterwithKubeadm
- o SettingupWeaveCNI
- o LaunchingKubernetesDashboard
- o SettingupakubernetesVisualizer
- o Resettingclustercreatedwithkubeadm

4:BuildingblocksofPods

- o Introductiontopod
- o WritingpodSpecification
- o LaunchingandOperatingPods(Logintothepod,browsingthewebUIofthepod)
- o AttachingavolumetoaPod
- o LaunchingMulti-ContainerPods
- o ConnectingtoIndividualContainers
- o LaunchingReplicaSetandFaultTolerance
- o Solutionpart-Deployingaworkerapp

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5: Managing Application Configurations with Config Maps and Secrets

- o Introduction to Config Maps and Secrets
- o Creating ConfigMap for Vote app
- o Setting up Environment Specific Configs
- o Adding Configs from Files
- o Creating Secrets to Encrypt Database
- o Setting Environment vars using Secrets

6: Setting up Firewall with Network Policies

- o Creating default network policy for namespace
- o Exposing public facing app and allowing inter namespace communication.

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