DevOpsTraining

DevOpsOverview

- Devops roles haveincreased from10%to45%in 2018andNearly70% ofthesystem administratorsarereplaced withroles in devops.

- In short Devopsisdefinitelya promisingcareer for allITprofessionals. Innextfewyears90%ofthecompanieswilladopt devops culture.

- InIndiaaveragesalaryforadevopsprofessionalsisRs.13,34,890peryear.

  DevopsprofessionalshaveHuge demandandpotentialin near future.Tobecomea devopsprofessionalyou shouldlearn few automation tools like Chef, Puppet, Ansible, Jenkins and few other veryuseful tools like GIT, Nagios, Dockers.

- Apponixisdedicatedtoprovidebestlearningexperienceforitsstudentssince6years.WeofferthebestDevOpstrainingin Bangalore,weareproudtosaywearethetop DevOps trainingprovider in Bangalore,wemakesureallour students will get good training experience.

- AllourDevOpsinstructorsareworkinginMNCandhavemin7yearsofexperience.

- Apponix DevOpsTrainingcourseisdesigned byindustryexpertsandtocover latestmarket cloud requirements.

- DevOpsCertification TrainingCoursewhichwillprepareyoufor acareerinaDevOpsenvironment,thefast-growing field that bridges the gap between software developers and operations.

- Youwill becomeanexpertindeployment,automation ofconfigurationmanagementtoolssuchasGIT,Docker, Jenkins, Puppet and Nagios.

- DevOpsTrainingfromApponixwillhelpyougainskillsontoolswhichareusedindevopsenvironment.

  In DevOps training course you will be equipped with latest technologies used in theDevOps environment The topicscoveredareveryuptodateandverymuchrelevanttothedevops,Theskillsyougainwillbeveryhelpfultoworkineitherproduction support team, projects team or BAU Team.

DevOpsTrainingcourseobjectives:

- In-depthknowledgeon ContinuousDevelopment,ContinuousIntegration,andContinuousTesting by performing hands-on on GIT, Jenkins and Selenium

- ComprehensiveknowledgeonConfigurationManagement,andContinuousDeploymentusingPuppet,Ansible Working on Continuous Deployment stagebyperforminghands-on on popular tools like Docker and Kubernetes

- Theexposuretothestageofcontinuousmonitoringusing Nagios

- The ability to automate all aspectsof a moderncode delivery and deploymentpipeline using:Source code management tools

www.apponix.com

RegisteredOffice:-Bangalore:80505-80888

Hubli:9069980888

Email-id:info@apponix.com

APPONIX academy
SINCE 2013

- Build&monitoringtools
- Testautomationtools
- Containerizationthrough
- DockerConfigurationmanagementtools

WhychooseApponixasaTopDevOpsTraininginstituteinBangalore?

- Apponixhasexcellenttrainersfor Devopswithrichexperienceinindustry.
- 100%studentsatisfactionrateinDevOpstraining
- Morethan1000studentscompletedtrainingindevopssince2013
- ExcellentLabfacilityforDevOpsTraining
- Wehaveexcellentratingtilldate,overalll4.9RatinginGoogle&Facebook.

Course Duration: 40 Hours

DevOpsTrainingCourseContent

1:DevopsLabSetuptoolsfor LinuxandwindowsEnvironment

- GitBashinstallationandGithubaccountsetup
- TomcatinstallationandConfiguration
- JfrogArtifactoryinstallationandConfiguration
- MavenInstallationandConfiguration
- JenkinsinstallationandConfiguration
- AnsibleInstallationandConfiguration
- SonarqubeinstallationandConfiguration
- DockerInstallationandconfiguration
- JavainstallationandConfiguration
- EnvironmentalvariablesetupforbothwindowsandLinux

2:IntroductiontoDevopsandDevsecops

- IntroductiontoDevOps
- WhatisDevOps?
- SDLCmodels,Lean,ITIL, Agile
- WhyDevOps?
- Historyof DevOps
- DevOpsStakeholders
- DevOpsGoals
- Importantterminology
- DevOpsperspective

www.apponix.com

RegisteredOffice:-Bangalore:80505-80888

Hubli:9069980888

Email-id:info@apponix.com

APPONIX academy
SINCE 2013

- o DevOpsand Agile
- 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 ProcessflowofScrumMethodologies
- 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.

7:BootandPackageManagement:

- o Securingsingle-usermode(sulogin)
- o Shuttingdownandrebootingthesystem
- o RPMPackageManager,InstallingandRemovingSoftware,UpdatingaKernelRPM
- o YumCommandset,Installpackagesbyusingyum.
- o Apt-getcommandset,Apt-cachepackagemanagement

8:UserAdministration:

- o Understandingdifferenttypesofgroupsandcreation ofgroups
- o Creationofusersindifferentgroups
- o UnderstandingPasswd,ShadowFiles
- o Understandingpasswdaging
- o Creationofquotasforusers,groupsandfilesystems
- o Understandinguserssecurityfiles
- o ThedifferentcommandsforMonitoringtheusers
- o TROUBLESHOOTING
- o Automationofjobs–Cron,at
- o Workingwithcommandstar,find,grep,etc.

9:Runlevels:

- o Understandingthedifferenttypesofrun-levels
- o Understandingdifferenttypesofshutdowncommands
- o Understandingruncontrolscripts
- o Understandingthedifferenttypes

VersionControl/SCM(Git)

1: IntroductiontoGit

- o OverviewofSVN,GIT,Clearcase,perforce&Comparison
- o IntroductionofGit
- o SelectingGitClient
- o CreatingRepository
- o WorkingwithTag
- 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 AnsibleRequirementsSpecification
- 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

www.apponix.com

RegisteredOffice:-Bangalore:80505-80888

Hubli:9069980888

Email-id:info@apponix.com

APPONIX academy
SINCE 2013

5:PlayandPlaybooks

- o OverviewofAnsiblePlaybooks
- o PlaybookLanguageExample
- o Workingon AnsibleHandlers
- o ExecutingaPlaybook.

DockerModules

1:GettingStartedwithDocker

- o IntroductiontoDocker.
- o What'sunderthehood-Namespaces,CgroupsandOverlayFS
- o UnderstandingVirtualization
- 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/ToDockerHub.

4:DockerNetworking

- o IntroductiontoDockerNetworking
- o FindingtheIPAddress ofaContainer
- o SettingUpaCustomBridgeNetworkfor Docker

5:ContainerOperations

- o PortMappingforDocker
- o Creating, Starting,Stopping,Renaming,RemovingContainers
- o InspectingContainers
- o LimitingRresourcesMemoryandCPU
- o PrioritizingCPUUtilization

6:DockerCompose

- o IntroductiontoDocker compose
- o CreatingDockercomposefile
- o ExecutingDockerComposefile

JenkinsModules

1:IntroductiontoContinuousIntegrationandJenkins-CI/CD

- o WhatisContinuousIntegration
- o JenkinsContinuousIntegration
- o WhatisContinuousDeployment
- o JenkinsVsJenkinsEnterprise

2:JenkinsInstallation

- o DownloadingandInstallingJenkinsusingTomCat
- o CreatingJenkinsasaService.
- o StartingandStoppingJenkins

3:ConfigureJenkinsandUserManagement.

- o SecureJenkins
- o Createanewuser
- o Generatesshkeyfor Jenkinsuser
- o Plug-inmanagement

4:Jenkinsjobs setup

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

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 Mavenprojectcreation
- 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 Centralrepoand Remoterepo
- o MavenDependenciesandplugin

APPONIX academy
SINCE 2013

CompleteguidetoKubernetes

1:IntroductiontoKubernetes

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

2:KeyConceptsofKubernetes

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

3:SettingupEnvironment

- o   ProvisioningandconfiguringonAWS
- o   InitializeClusterwithKubeadm
- o   SettingupWeaveCNI
- o   LaunchingKubernetesDashboard
- o   SettingupaKubernetesVisualizer
- o   Resettingclustercreatedwithkubeadm

4:Buildingblocksof Pods

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

5:ManagingApplicationConfigurationswithConfigMapsandSecrets

- o IntroductiontoConfigMapsandSecrets
- o CreatingConfigMapforVoteapp
- o SettingupEnvironmentSpecificConfigs
- o AddingConfigsfromFiles
- o CreatingSecretstoEncryptDatabase
- o SettingEnvironmentvarsusingSecrets

6:SettingupFirewallwithNetworkPolicies

- o Creatingdefaultnetworkpolicyfornamespace
- o Exposingpublicfacingappandallowinginternamespacecommunication.

Theoretical discussion on DevOps AI Tools:

Explanation on tools that detect statistically buggy code patterns and structures,
helping developers avoid common traps.

- o This tells us about effective unit tests through analysis of the coverage of our codes. It reveals
- o Brief on identifying bugs, security vulnerabilities, and optimization opportunities
- o Discussion on how Reduced Time Spent Searching Online

Theoritical discussion on OpenSource security tools :

- o Vulnerability Tracking Tools:
- o Dashboard Tools:
- o Compliance Tools:
- o Infrastructure Security Tools:
- o Container Security Tools: