CONT_22CAT-741 :: DEVOPS PROCESS AUTOMATION

Course Syllabus and Suggestive Readings

Syllabus

Unit-I	Basics of Software Engineering Agile Methodology and DevOps Process	Contact Hours: 15
Introduction to DevOps	The Basics of testing in DevOps, Integration of testing in DevOps, Importance of Continuous testing in DevOps, Tips for Developing DevOps testing strategy, DevOps Testing Tools.	
Version Control in DevOps	Distributed Version control system: Git, Install Git on Ubuntu, Install Git on Windows. Building the Code, Need for Building the Code.	
Unit-II	Managing Source Code	Contact Hours: 15
Tools Used for Build Process	Jenkins. Managing the Build Process: Jenkins Build Server, Managing Build Dependencies, The Final Artefact, Managing the build Process using Jenkins, how to trigger a build from external links, how to Chain Jobs in Jenkins, how to use Command line interface for Jenkins.	
Continuous Integration and Its Tools	Introduction to Continuous Integration: Continuous Delivery Pipeline, Setting Up Delivery Pipelines in Jenkins, Security aspects in the build process. Continuous Integrated Tools: Team city: Installing team City, Configuring TeamCity	
Managing Configuration in DevOps	Configuration Management, Software Configuration Management, Configuration Management in DevOps	
Unit-III	Dockers in DevOps	Contact Hours:15

DevOps	Manager (VMM), Types of Virtualization, Docker containers and their purpose, Purpose of using Docker. Docker Architecture: Advantages of Docker's Containers, Underlying Technology, Using Docker Commands, working with Docker, working with a Docker Container, Pushing Docker Images to Docker Repository.
Installing Docker for Windows	Working with Docker Toolbox, Kitematic.
PUPPET and CHEF for DevOps	Introduction to PUPPET: Puppet Architecture, Puppet Installation, Real Time Manifest, CHEF. Saltstack for DevOps: Introduction to Saltstack: Working of Saltstack, Salt-Key. Installing Saltstack: Installation of Salt on Linux, Installation of Salt on Windows. Configuring Saltstack: Configuring Firewall, Configuring Salt Minion, Starting Master and Minion, Accepting Minion Key, Running Commands on Minion.

a. Self-study topics for Advance learners: How QA fits in DevOps, Configuration Management Tools, Need of Saltstack

b. Textbooks / Reference Books

TEXT BOOKS

T1. Sanjeev Sharma, The DevOps Adoption Playbook: A Guide to Adopting DevOps in a Multi-Speed IT Enterprise, Wiley IBM Press.

T2. Jennifer Davis & Katherine Daniels, Effective DevOps: Building a Culture of collaboration, Affinity and Tooling at Scale, O'Relly Media, Inc.

T3.Paul Swartout, Continuous Delivery and DevOps, Packt Publishing

REFERENCE BOOKS

R1. ArunaRavichandaran, DevOps for Digital Leaders, CA Press Apress.

R2. Nathaniel Felsen, Effective DevOps with AWS, Packt Publishing Ltd.

R3. Michael Duffy, DevOps Automation Cookbook, Packt Publishing Ltd.

Last modified: Monday, 19 June 2023, 12:50 PM

Previous activity

◄ Course Information

Jump to...

Next activity

Netiquette Guidelines ►