DevOps

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Introduction to Devops

- Define Devops
- What is Devops
- SDLC models,Lean,ITIL,Agile
- Why Devops?
- History of Devops
- Devops Stakeholders
- Devops Goals
- Important terminology
- Devops perspective
- Devops and Agile
- Devops Tools
- Configuration management
- Continuous Integration and Deployment

LINUX Basics:

- Unix and linux difference
- Linux File system structure
- Basic linux/unix commands
- Changing file permissions and ownership
- Types of links soft and hard link
- Filter commands
- Simple filter and advance filter commands
- Start and stop services
- Find and kill the process with id and name
- Package installation using RPM and YUM

GIT: Version Control:

- Introduction
  1. Version control systems
  2. Local, Centralized and distributed
- Installing Git
  1. Installing on Linux
  2. Installing on Windows
  3. Initial setup
- Git Essentials
  1. Creating repository
  2. Cloning, check-in and committing
  3. Fetch pull and remote

4. Branching

Jenkins – Continuous Integration

- Introduction.
    1. Understanding continuous integration
    2. Introduction about Jenkins
    3. Build Cycle
    4. Jenkins Architecture
- Installation
    1. Obtaining and installing Jenkins
    2. Installing and configuring GIT
    3. Java installation and configuration
    4. Maven Installation
    5. Exploring Jenkins Dashboard.
- Jobs
    1. Creating Jobs
    2. Running the Jobs
    3. Adding and updating Plugins
    4. Disabling and deleting jobs
- Build Deployments
    1. Understanding Deployment.
    2. Tomcat installation and configuration
    3. Deployment Plugins
    4. Deploying a war file from Jenkins to Tomcat
    5. Maven Build Scripts
- Securing Jenkins
    1. Authentication
    2. Jenkins Plugin
    3. Authorization
    4. Confidentiality
    5. Creating users
    6. Best Practices for Jenkins
- Pipeline Automation

NEXUS
- Nexus prerequisites
- Installing and Running Nexus
- Using the Nexus User Interface

ANSIBLE:

- Ansible: introduction
- Ansible: Installation
- Ansible: Installation demo
- Ansible: First Playbook
- Ansible: First Playbook demo
- Ansible: Roles
- Ansible: Best Practices
- Ansible: Directory Layout
- Ansible Tower

Docker– Containers:

- **Introduction**
    1. What is a Docker
    2. Use case of Docker
    3. Platforms for Docker
    4. Dockers vs Virtualization
- **Architecture**
    1. Docker Architecture.
    2. Important Docker components
    3. Understanding the Docker components
- **Installation**
    1. Installing Docker on Linux.
    2. Understanding Installation of Docker on Windows.
    3. Some Docker commands.
- **Provisioning**
    1. Docker Hub.
    2. Downloading Docker images.
    3. Running Docker images
    4. Running commands in container.
    5. Running multiple containers.
- **Custom images**
    1. Creating a custom image.
    2. Running a container from the custom image.
    3. Publishing the custom image.
- **Docker Networking**
    1. Accessing containers
    2. Linking containers
    3. Exposing container ports
    4. Container Routing

AWS

1. Introduction to the AWS Product
2. AWS Identity and Access Management (IAM)
3. Amazon Elastic Compute Cloud(EC2)
4. Amazon Simple Storage Service (S3)
5. Elastic Block Storage (EBS)
6. Elastic Load Balancing (ELB)
7. Amazon Relational Database Service (RDS)
8. Auto Scaling
9. Amazon ElastiCache
10. Amazon CloudWatchetc
11. etc.,..