

NS3EDU.

Learn Today  Earn Tomorrow

CLOUD COMPUTER **DIPLOMA**



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NS3EDU: BRIDGE YOUR IT DREAMS TO REALITY



EMPOWERING CAREERS THROUGH KNOWLEDGE

Looking to make it big in the world of IT networking? Look no further than NS3Edu! We help beginners learn the ropes & experienced pros master new skills. Come join us and build your dream career!



MISSION

The mission of NS3Edu is to empower our candidates with in-depth knowledge of IT fundamentals along with real-time industry experience and also take 100% responsibility for the placement by making them Industry fit.

CERTIFICATES



VISION

In-depth knowledge + hands-on experience + analytical thinking = placement



Learning



Opportunity



Experience



Career



ROADMAP OF

JOB

PLACEMENT

Confused in **Different** Career Options



Qualifies- Job Placement



Counselling & **Demo** sessions



Opportunities for **Job** Placement



Student Enrollment & Induction **session**



Screening by Corporate **HR & Tech** Team



Course **Kick off** (Live Classes)



2 Week **Technical Task** Training



Access to Recorded Sessions, E book & Lab Manual



NS3 Tech **Industrial** Exposure



Course **Completion**



Learning



Opportunity



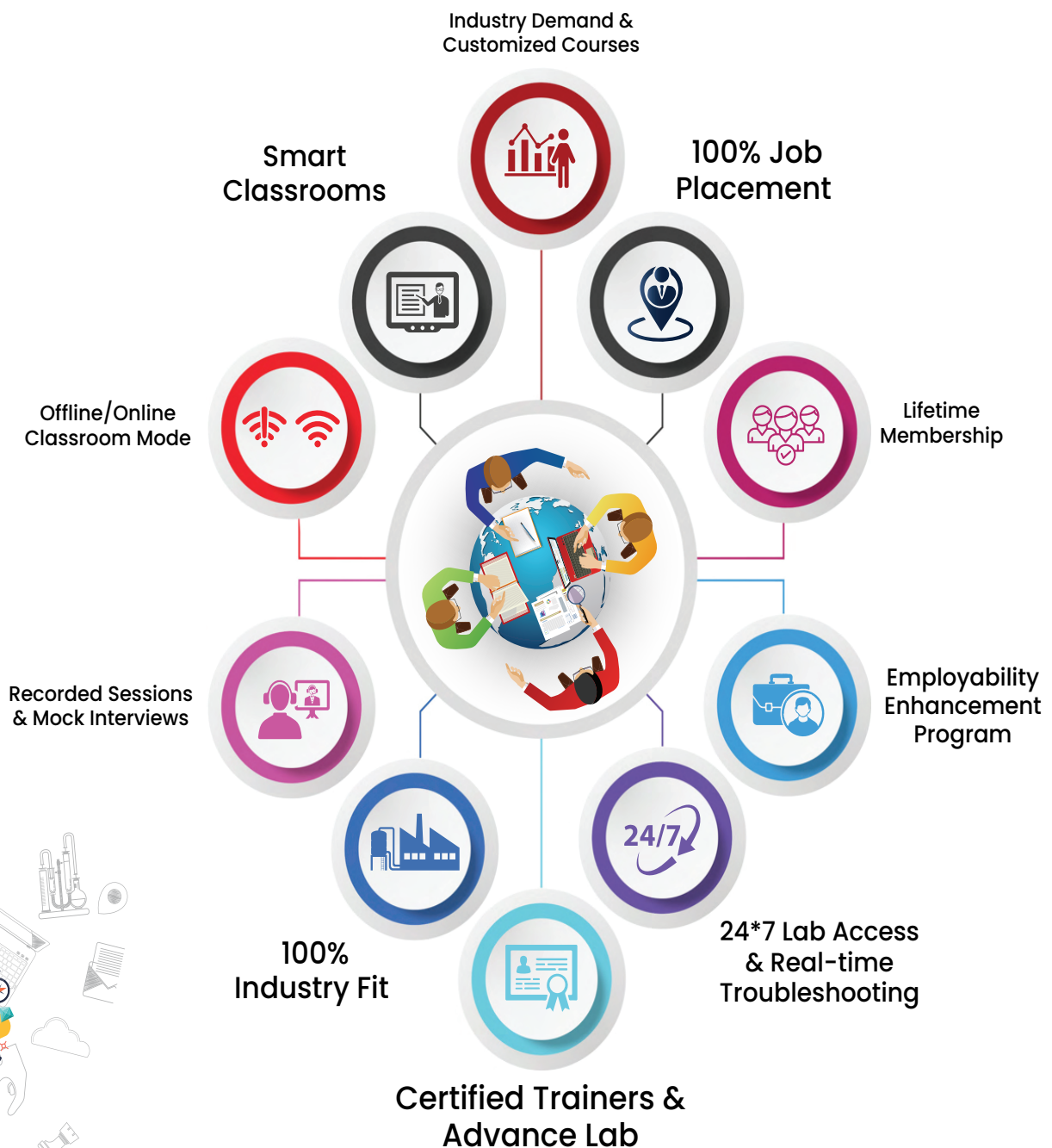
Experience



Career

WHAT MAKES US UNIQUE?

USP's



NETWORKING ASSOCIATE COURSE OUTLINE

Module-1

1. General Networking

- Introduction to Networks
- OSI Reference Model
- Ethernet Technologies
- Hubs vs Switches vs Routers
- IPv4 Addressing and Subnetting
- IPv6 Addressing
- TCP & UDP
- Introduction to 802.11 Wireless
- Cisco 802.11 Implementations

2. CCNA

Network Fundamentals

- Explain the role and function of network components
- Describe characteristics of network topology architectures
- Compare physical interface and cabling types
- Identify interface and cable issues (collisions, errors, mismatch duplex, and/or speed)
- Compare TCP to UDP
- Configure and verify IPv4 addressing and subnetting
- Describe the need for private IPv4 addressing
- Configure and verify IPv6 addressing and prefix
- Compare IPv6 address types
- Verify IP parameters for Client OS (Windows, Mac OS, Linux)
- Describe wireless principles
- Explain virtualization fundamentals (virtual machines)



Network Fundamentals

- Configure and verify VLANs (normal range) spanning multiple switches
- Configure and verify inter switch connectivity
- Password Recovery And Switch Reset (Layer2/Layer 3)
- Configure and verify Layer 2 discovery protocols (Cisco Discovery Protocol and LLDP)
- Configure and verify (Layer 2/Layer 3) EtherChannel (LACP)
- Describe the need for and basic operations of Rapid PVST+ Spanning Tree Protocol and identify basic operations
- Upgradation of the Firmware's for Layer 2 and Layer 3 Switches through TFTP and USB
- Compare Cisco Wireless Architectures and AP modes
- Factory Reset of Access Points and Basic Ap Configuration
- Describe physical infrastructure connections of WLAN components (AP,WLC, access/trunk ports and LAG)
- Describe AP and WLC management access connections (Telnet, SSH, HTTP,HTTPS, console, and TACACS+/RADIUS)
- Configure the components of a wireless LAN access for client connectivity using GUI only such as WLAN creation, security settings, QoS profiles, and advanced WLAN settings

IP Connectivity

- Interpret the components of routing table
- Determine how a router makes a forwarding decision by default
- Configure and verify IPv4 and IPv6 static routing
- Configure and verify single area OSPFv2
- Describe the purpose of first hop redundancy protocol

Security Fundamentals

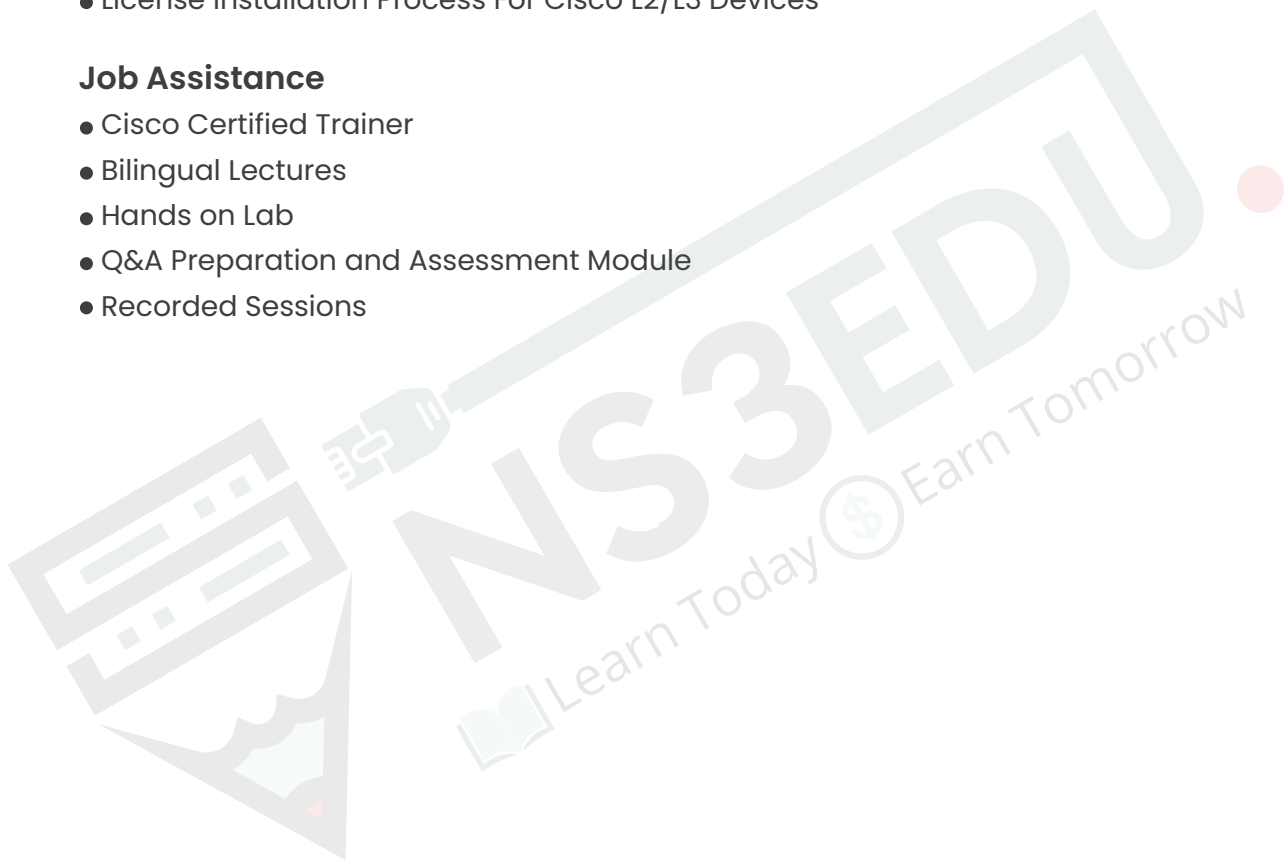
- Define key security concepts (threats, vulnerabilities, exploits, and mitigation techniques)
- Describe security program elements (user awareness, training, and physical access control)
- Configure device access control using local passwords
- Describe security password policies elements, such as management, complexity, and password alternatives (multi factor authentication, certificates, and biometrics)
- Describe remote access and site-to-site VPNs
- Configure and verify access control lists
- Configure Layer 2 security features (DHCP snooping, dynamic ARP inspection, and port security)
- Differentiate authentication, authorization, and accounting concepts
- Describe wireless security protocols (WPA, WPA2, and WPA3)
- Configure WLAN using WPA2 PSK using the GUI
- Converting an AP from Mobility Express to CAPWAP Type and Vice Versa
- Configuration of AP as a Controller
- WLAN Configuration Cisco Mobility Express Controller with (WPA,WPA2,WPA3, Guest WLAN)

Automation & Programmability

- Explain how automation impacts network management
- Compare traditional networks with controller-based networking
- Describe controller-based and software defined architectures (overlay, underlay, and fabric)
- Compare traditional campus device management with Cisco DNA Center enabled device management
- Describe characteristics of REST-based APIs (CRUD, HTTP verbs, and data encoding)
- Recognize the capabilities of configuration management mechanisms Puppet Chef & Ansible
- Interpret JSON encoded data
- License Installation Process For Cisco L2/L3 Devices

Job Assistance

- Cisco Certified Trainer
- Bilingual Lectures
- Hands on Lab
- Q&A Preparation and Assessment Module
- Recorded Sessions



Module-1 Exam

LINUX COURSE OUTLINE

Module-2

1) Linux Introduction

- What is Linux
- Why Linux
- Linux vs Windows
- CLI vs GUI

2) Distribution of Linux

- Types of Linux
- Different edition of Linux

3) Lab-setup & (errors-fix)

- VMware vs Virtual box
- Installation of VMware
- Licensing
- Interface setting's

4) Linux Interface

- Introduction to Linux interface
- Difference B/W Linux UI & Windows UI
- Setting up tools and other packages
- Getting familiar with Linux

5) Access command line

- What is Terminal
- Types of Terminal
- Setting up Terminal
- Learning Basic commands For CLI
- Top 100 Commands

6) Linux directory structure

- Understanding Linux Directory Structure
- Absolute path VS Relative path
- Getting familiar with Root Directory



7) Moving around directories

- Moving around via GUI & CLI
- Accessing Restricted files & directories

8) Create,view,edit text files via command line

9) Manage files from terminal

10) Getting help in linux

- Troubleshooting Common Linux Problem

11) Managing users in Linux

- Who is Root User
- Who is Service User
- Create user using Terminal
- Delete user's using Terminal
- Modify user using Terminal
- What is passwd file
- How to open Passwd file?

12) Managing groups in Linux

- What are Groups?
- Create Groups
- Delete Groups
- Set up Group Password

13) File permission

- How to access File Permission
- Understanding Linux file Permission
- Changing File permission
- Changing File Owner

14) Operators used in command line

- What are Operators
- Why are Operators used for?

Module-2 Exam

AWS COURSE OUTLINE

Module-3

Lesson 01 – AWS Overview

- AWS Overview
- History and Evolution of AWS Knowledge Check
- Overview of AWS Products and Services Quiz
- Key Takeaways

Lesson 02 – Designing Highly Available, Cost-efficient, Fault-tolerant, & Scalable Systems

- Designing Highly Available, Cost-efficient, Fault-tolerant, and Scalable Systems How to design Cloud Services
- Knowledge Check Planning & Designing Knowledge Check Monitoring and Logging
- Knowledge Check
- Hybrid IT architectures
- Knowledge Check
- Practice Assignment Designing Hybrid Storage
- Quiz

Lesson 03– Identity and Access Management (IAM)

- IAM Overview and Policies
- Knowledge Check
- IAM Users, Groups, and Roles Knowledge Check
- IAM Best Practices
- IAM Users, Groups, and Roles Knowledge Check
- IAM Best Practices
- Practice Assignment Configuring IAM Access Quiz
- Key Takeaways



Lesson 04 – Amazon Virtual Private Cloud(VPC)

- Amazon Virtual Private Cloud (VPC)
- Amazon VPC and Subnets
- Networking
- Using Security Groups and Network ACLs Knowledge Check
- Amazon VPC Best Practices and Costs Practice Assignment Designing a Custom VPC Quiz
- Knowledge Check

Lesson 05- Elastic Compute Cloud (EC2)

- Cloud Compute with AWS
- Amazon EC2 Overview Amazon Machine Images (AMI)
- Launch and connect to an EC2
- Linux instance Demo 1
- Launch and connect to an EC2 Windows instance Demo 2
- Create an AMI Demo 3
- Introduction to EC2 Instance Types
- Overview of Amazon EBS
- EC2 Pricing Knowledge Check
- Elastic Load Balancing (ELB)
- Auto Scaling
- AWS Services
- AWS Lambda Demo
- Amazon Elastic Container Service Knowledge Check
- EC2 Best Practices & Costs Practice Assignment Configure ELB Quiz
- Key Takeaways

Lesson 06 – Amazon Simple Storage Service(S3)

- Amazon Simple Storage Service (S3) S3 Overview and Buckets Knowledge Check
- Version Control and Lifecycle Management Knowledge Check
- CloudFront and CDNs Knowledge Check Security & Encryption Knowledge Check
- Amazon Import – Export Snowball Knowledge Check
- S3 Best Practices and Costs
- Practice Assignment Create an Amazon S3 bucket
- Quiz
- Knowledge Check

Lesson 07 – Amazon Route 53

- Amazon Route 53 Concepts
- Knowledge Check
- Amazon Route 53 Best Practices and Costs
- Practice Assignment Amazon Route 53 Hosted Zone 0 Quiz
- Key Takeaways

Lesson 08 – Databases

- Databases Databases Overview
- Amazon Relational Database Service (RDS)
- AMI Databases
- Key Takeaways
- Amazon DynamoDB
- Amazon Redshift
- Amazon ElastiCache
- Amazon Aurora
- AWS Database Migration Services (DMS)
- Database Best Practices and Costs
- Practice Assignment
- Amazon RDS Quiz
- Key Takeaways

● Lesson 9- Application Services

- AWS Application Services
- Amazon Elastic Transcoder
- Amazon Workspaces
- Application Services Best Practices and Costs
- Practice Assignment Amazon SNS
- Quiz
- Key Takeaways

Lesson 10 – Security Practices for optimum Cloud Deployment

- Security Practices for Optimum Cloud Deployment
- AWS Responsibilities and Security Attributes
- Knowledge Check
- AWS CloudFormation and Design patterns
- Practice Assignment AWS CloudWatch Quiz
- Key Takeaways



Lesson 11 – Disaster Recovery

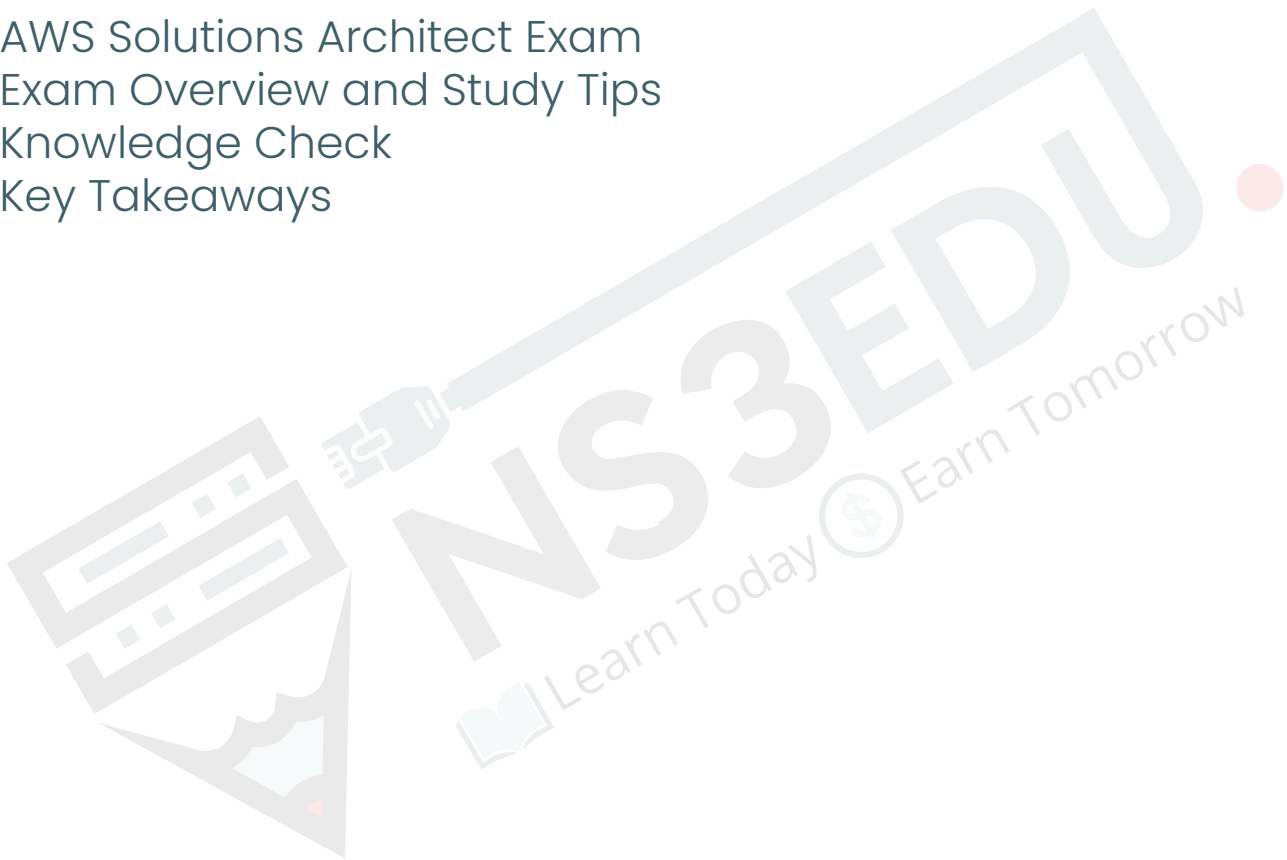
- Disaster Recovery
- Overview and Products for Disaster Recovery
- Practice Assignment Disaster Recovery
- Quiz
- Key Takeaways

Lesson 12 – Troubleshooting

- Troubleshooting Troubleshooting and Support Quiz
- Key Takeaways

Lesson 13 – AWS Solutions Architect Exam

- AWS Solutions Architect Exam
- Exam Overview and Study Tips
- Knowledge Check
- Key Takeaways



Module-3 Exam

DEVOPS COURSE OUTLINE

Module-4

Weeks 1

- Understand DevOps
- Roles and responsibilities
- Understand the infrastructure layouts and its challenges
- Important terminology
- Continuous Integration and Deployment

Weeks 2

- Introduction to multi-tier architecture Application
- Software Development Life Cycle
- DevOps tools
- Traditional models for SDLC

Git and Maven

- Introduction to GIT and github

Weeks 3

- GIT branches
- Initialize remote repositories
- Rebasing
- Push commits to github
- Resetting



Weeks 4

- Reverting
- 17 Conclusion
- 18 Create builds using maven

Jenkins

- 19 Introduction to continuous integration
- 20 Jenkins master slave architecture

Weeks 5

- Understanding CI/CD pipelines
- 22 Creating an end-to-end automated CI/CD Pipelines

Hands-on- exercise -

- 23 Creating a Jenkins Master Slave on AWS
- 24 Installing Plug-ins in Jenkins
- 25 Creating Jenkins Builds

Weeks 6

- Creating Scheduled Builds
- Triggering Jobs using Git Web Hooks
- Using the Pipeline Plugin in Jenkins
- Introduction to DevOps
- Understand DevOps

Weeks 7- Docker

- Introduction to Docker
- Understanding Docker Lifecycle
- Components of Docker Ecosystem
- Common Docker Operations
- Creating a DockerHub Account

Weeks 8

- Committing changes in a Container
- Pushing a Container Image to DockerHub
- Creating Custom Docker Images using Dockerfile

Hands-on-exercise -

- Common Docker Operations
- Creating a DockerHub Account

Weeks 9

- Committing Changes to a Container
- Pushing container to DockerHub
- Creating Local Image Repository
- Building an Image using Dockerfile

Ansible

- What is Ansible?

Weeks 10

- Ansible Architecture
- Setting up Master slave using Ansible
- Ansible Playbook
- Ansible Roles
- Applying Configuration using Ansible

Weeks 11

- Installing Ansible
- Creating Playbook using YAML
- Creating an Ansible role

CHEF

- What is Chef and its key components
- Installing Chef Workstation



Weeks 12

- Cookbooks and Recipes
- Nodes and configuration Management
- Templates and Cookbook Attributes
- Chef Server
- Version Control and Testing

Weeks 13–Chef Automate

- Committing Changes to a Container
- Pushing container to DockerHub
Creating Local Image Repository
- Building an Image using Dockerfile
- **Ansible**
- What is Ansible?

Weeks 14

- Provisioning and Deployment
- Variables and Modules
- Conditional logic and loops
- Terraform State and Data Sources
- Terraform & Continuous Integration/Deployment (CI/CD):

Weeks 15–Kubernetes

- Introduction to Kubernetes
- Docker Swarm vs Kubernetes
- Alternate ways of deploying Kubernetes
- YAML Files
- Creating a Deployment in Kubernetes using YAML

Weeks 16

- Services in Kubernetes
- 77 Ingress in Kubernetes
- 78 Case Study – Kubernetes Architecture

Kubernetes lab continues & Nagios

Hands-On-Exercise -

- Setting up Kubernetes using kubeadm
- Installing Kubernetes using kops and GCK

Weeks 17

- Creating a Deployment
- Creating Services
- Creating an Ingress
- Demonstrating the use of Ingress, services & deployments together

Nagios

- What is nagios?

Weeks 18

- How to configure nodes?
- Monitor different nodes

Module-4 Exam



EMPLOYABILITY SKILLS

PD Classes

Resume Building

Technical Workshops

Linkedin Classes

Q/A Prepration

Hands on Practice with Advance Devices

Mock Interview rounds with HR & Tech Team

Internship Opportunities



OUR PLACEMENT PARTNERS



Learning



Opportunity



Experience



Career

ACHIEVEMENTS



GURUGRAM (H.O)

B9, 3rd Floor, 302, Block B,
Old DLF, Sector 14, Gurugram
Haryana

+91 8800011138
info@ns3edu.com

LUCKNOW

Office space 1, First Floor Omaxe
Avenue Near Omaxe City
Bijnor Rd, Lucknow

+91 7703030320
info_lko@ns3edu.com

DELHI (BADARPUR)

Property No:-3, 3rd Floor Main
Mathura road nearby Badarpur
Police Station, Ch. Dharamvir
Market Badarpur New Delhi 110044

+91 7428080999
info_bpb@ns3edu.com



 www.ns3edu.com

 +91 8800 0111 38

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