

FULL STACK CLOUD

PROFESSIONAL INDUSTRY TRAINING SYLLABUS

A comprehensive, industry-oriented learning path to build, deploy, and scale modern cloud-native applications.



PROJECTS

REAL-WORLD
PROJECTS
TO BUILD PORTFOLIC
AND PRACTICAL
SKILLS.



HANDS-ON LABS

PRACTICAL LABS
WITH
STEP-BY-STEP
GUIDED EXERCISES.



INDUSTRY CERTIFICATIONS

PREPARE FOR
GLOBALLY
RECOGNIZED CLOUD
CERTIFICATIONS. TO
BUILD PORTFOLIC
AND PRACTICAL
SKILLS.



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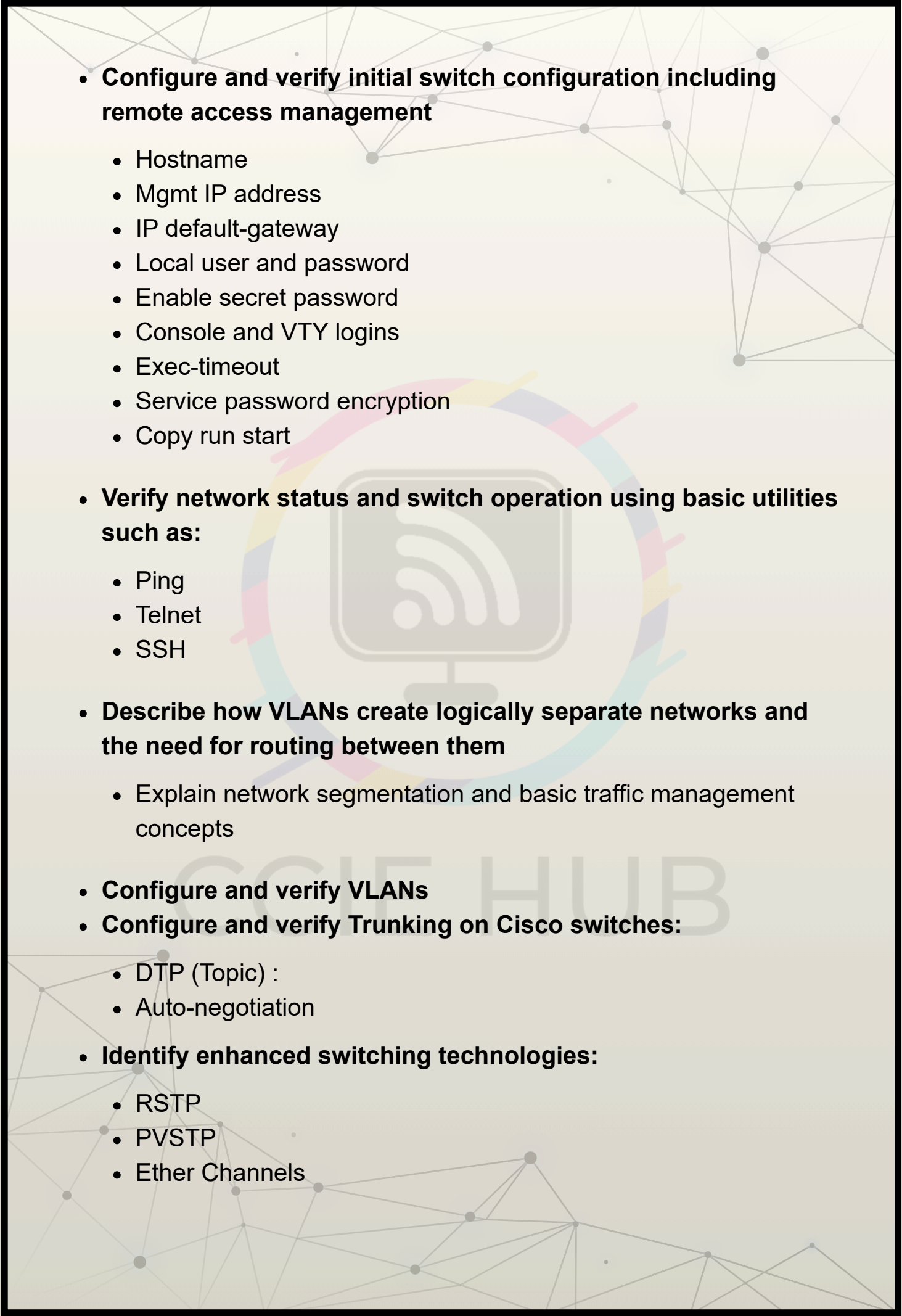
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OPERATION OF IP DATA NETWORKS

- Recognize the purpose and functions of various network devices such as routers, switches, bridges, and hubs
- Select the components required to meet a given network specification
- Identify common applications and their impact on the network
- Describe the purpose and basic operation of the protocols in the OSI and TCP/IP models
- Predict the data flow between two hosts across a network
- Identify the appropriate media, cables, ports, and connectors to connect Cisco network devices to other network devices and hosts in a LAN

LAN SWITCHING TECHNOLOGIES

- Determine the technology and media access control method for Ethernet networks
- Identify basic switching concepts and the operation of Cisco switches:
- Collision Domains
- Broadcast Domains
- Ways to switch:
 - STORE
 - FORWARD
 - CUT THROUGH
 - CAM TABLE

- 
- **Configure and verify initial switch configuration including remote access management**
 - Hostname
 - Mgmt IP address
 - IP default-gateway
 - Local user and password
 - Enable secret password
 - Console and VTY logins
 - Exec-timeout
 - Service password encryption
 - Copy run start
 - **Verify network status and switch operation using basic utilities such as:**
 - Ping
 - Telnet
 - SSH
 - **Describe how VLANs create logically separate networks and the need for routing between them**
 - Explain network segmentation and basic traffic management concepts
 - **Configure and verify VLANs**
 - **Configure and verify Trunking on Cisco switches:**
 - DTP (Topic) :
 - Auto-negotiation
 - **Identify enhanced switching technologies:**
 - RSTP
 - PVSTP
 - Ether Channels

- **Configure and verify PVSTP operation:**
- **Describe root bridge election**
- **Spanning tree mode**

IP ADDRESSING (IPV4/IPV6)

- **Describe the operation and necessity of using private and public IP addresses for IPv4 addressing**
- **Identify the appropriate IPv6 addressing scheme to satisfy addressing requirements in a LAN/WAN environment**
- **Identify the appropriate IPv4 addressing scheme using VLSM and summarization to satisfy addressing requirements in a LAN/WAN environment**
- **Describe the technological requirements for running IPv6 in conjunction with IPv4:**
 - **Dual stack**
 - **Describe IPv6 addresses:**
 - **Global unicast**
 - **Multicast**
 - **Link local**
 - **Unique local**
 - **EUI 64**
 - **Auto-configuration**

IP ROUTING TECHNOLOGIES

- **Describe basic routing concepts:**
 - **packet forwarding**
 - **Router lookup process**
 - **Process Switching / Fast Switching / CEF**

- **Configure and verify using the CLI to set basic router configuration:**
 - **hostname**
 - **local user and password**
 - **enable secret password**
 - **console & VTY logins**
 - **exec-timeout**
 - **service password encryption**
 - **interface IP address**
 - **loopback**
- **banner**
- **motd**
- **copy run start**
- **Configure and verify operation status of a device interface:**
 - **Serial**
 - **Ethernet**
- **Verify router configuration and network connectivity using:**
- **ping**
 - **extended**
- **traceroute**
- **telnet**
- **SSH**
- **sh cdp neighbors**
- **Configure and verify routing configuration for a static or default route given specific routing requirements**
- **Differentiate methods of routing and routing protocols:**
 - **Static vs. dynamic**
 - **Link state vs. distance vector**

- next hop
- IP routing table
- Passive Interfaces (how they work)
- Admin distance
- split horizon
- metric
- **Configure and verify OSPF:**
 - Benefit of single area
 - Configure OSPFv2
 - Configure OSPFv3
 - Router ID
 - Passive Interface
 - Discuss multi-area OSPF
 - Understand LSA types and purpose
- **Configure and verify inter-VLAN routing (Router on a stack):**
 - sub-interfaces
 - upstream routing
 - encapsulation
- **Configure SVI interfaces**
- **Manage Cisco IOS Files**
 - Boot Preferences
 - Cisco IOS Images
 - Licensing
 - # Show license
 - # Change license
- **Describe the types, features, and applications of ACLs:**
 - standard (editing and sequence numbers)
 - extended
 - named
 - numbered
 - Log option

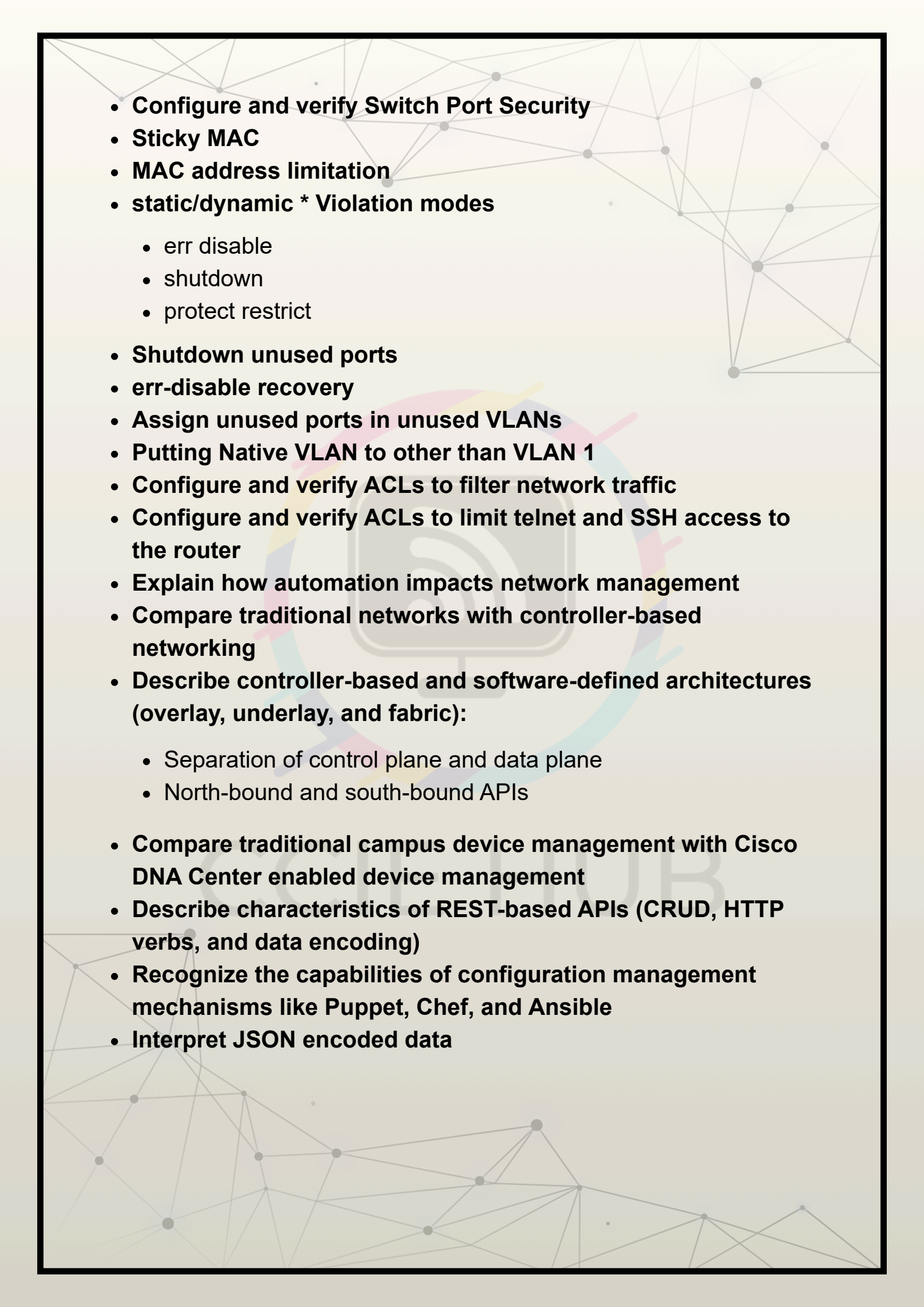
- **Configure and verify ACLs in a network environment:**
- **named, numbered, Log option**

NETWORK ADDRESS TRANSLATION (NAT)

- **Identify the basic operation of NAT:**
 - purpose, pool, static
 - 1 to 1 :- overloading
 - source addressing
 - one-way NAT
- **Configure and verify NAT for given network requirements**
- **Configure and verify NTP as a client**
- **Recognize High Availability (FHRP):**
 - VRRP, HSRP
 - GLBP
- **Configure and verify syslog:**
 - Utilize syslog output
- **Describe SNMP v2 and v3**

NETWORK DEVICE SECURITY

- **Configure and verify network device security features:**
 - Device password security
 - Enable secret vs. enable
 - Transport:
 - # disable telnet
 - # SSH
 - VTYs
 - Physical security
 - Service password
 - Describe external authentication methods

- 
- **Configure and verify Switch Port Security**
 - **Sticky MAC**
 - **MAC address limitation**
 - **static/dynamic * Violation modes**
 - err disable
 - shutdown
 - protect restrict
 - **Shutdown unused ports**
 - **err-disable recovery**
 - **Assign unused ports in unused VLANs**
 - **Putting Native VLAN to other than VLAN 1**
 - **Configure and verify ACLs to filter network traffic**
 - **Configure and verify ACLs to limit telnet and SSH access to the router**
 - **Explain how automation impacts network management**
 - **Compare traditional networks with controller-based networking**
 - **Describe controller-based and software-defined architectures (overlay, underlay, and fabric):**
 - Separation of control plane and data plane
 - North-bound and south-bound APIs
 - **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 like Puppet, Chef, and Ansible**
 - **Interpret JSON encoded data**

RED HAT LINUX

RH124 – RED HAT SYSTEM ADMINISTRATION – I

GET STARTED WITH RED HAT ENTERPRISE LINUX

- Describe and define open source, Linux distributions, and Red Hat Enterprise Linux.

ACCESS THE COMMAND LINE

- Log into a Linux system and run simple commands using the shell.

MANAGE FILES FROM THE COMMAND LINE

- Copy, move, create, delete, and organize files while working from the bash shell.

GET HELP IN RED HAT ENTERPRISE LINUX

- Resolve problems by using local help systems.

CREATE, VIEW, AND EDIT TEXT FILES

- Manage text files from command output or in a text editor.

MANAGE LOCAL USERS AND GROUPS

- Create, manage, and delete local users and groups, as well as administer local password policies.

CONTROL ACCESS TO FILES

- Set Linux file system permissions on files and interpret the security effects of different permission settings.

MONITOR AND MANAGE LINUX PROCESSES

- Evaluate and control processes running on a Red Hat Enterprise Linux system.

CONTROL SERVICES AND DAEMONS

- Control and monitor network services and system daemons using systemd.

CONFIGURE AND SECURE SSH

- Configure secure command line service on remote systems using OpenSSH.

ANALYZE AND STORE LOGS

- Locate and accurately interpret logs of system events for troubleshooting purposes.

MANAGE NETWORKING

- Configure network interfaces and settings on Red Hat Enterprise Linux server

ARCHIVE AND TRANSFER FILES

- Archive and copy files from one system to another.

INSTALL AND UPDATE SOFTWARE

- Download, Install, Update and manage software package from Red Hat and yum package repositories.

ACCESS LINUX FILE SYSTEMS

- Access, inspect and use existing file system on storage attached to a linux server.

ANALYZE SERVER AND GET SUPPORT

- Investigate and resolve in the web-based management interface, getting support Red Hat to help solve problems.

COMPREHENSIVE REVIEW

- Review the content covered in this course by completing hands on exercises.

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RH134 – RED HAT SYSTEM ADMINISTRATION – II

IMPROVE COMMAND LINE PRODUCTIVITY

- Run commands more efficiently by using advanced features of the bash shell, shell scripts, and various utilities provided by Red Hat Enterprise Linux.

SCHEDULE FUTURE TASKS

- Schedule commands to run in the future, either one-time or on a repeating schedule.

TUNE SYSTEM PERFORMANCE

- Improve system performance by setting tuning parameters and adjusting scheduling priority of processes.

CONTROL ACCESS TO FILES WITH ACLS

- Interpret and set access control lists (ACLs) on files to handle situations requiring complex user and group access permissions.

MANAGE SELINUX SECURITY

- Protect and manage the security of a server by using SELinux.

MAINTAIN BASIC STORAGE

- Create and manage storage devices, partitions, file systems, and swap spaces from the command line.

MANAGE LOGICAL VOLUMES

- Create and manage logical volumes containing file systems and swap spaces from the command line.

IMPLEMENT ADVANCED STORAGE FEATURES

- Manage storage using the Stratis local storage management system and use VDO volumes to optimize storage space in use.

ACCESS NETWORK-ATTACHED STORAGE

- Use the NFS protocol to administer network-attached storage.

CONTROL THE BOOT PROCESS

- Manage the boot process to control services offered and troubleshoot and repair problems.

MANAGE NETWORK SECURITY

- Control network connections to services using the system firewall and SELinux rules.

INSTALL RED HAT ENTERPRISE LINUX

- Install Red Hat Enterprise Linux on servers and virtual machines.

AWS CLOUD

(SOLUTION ARCHITECT ASSOCIATE)

MODULE 1 - GETTING STARTED WITH AWS

- What is Cloud Computing
- AWS Free Tier Account Creation Process
- Amazon Web Services (AWS) Architecture
- Facts about region and best practices

MODULE 2 - AMAZON ELASTIC COMPUTE CLOUD (AMAZON EC2)

- How to create Windows EC2 Instance
- Web site hosting on Windows EC2 Instance
- How to create Linux EC2 Instance

MODULE 3 - AMAZON S3 - ADVANCE

- Amazon S3 Overview
- S3 Bucket Policy
- Amazon S3 Event Notifications
- Amazon S3 Multipart Upload
- AWS Cloud
- Amazon S3 Encryption - Server Side Encryption using S3 Managed Key
- Amazon S3 Encryption using KMS Keys
- Cross-origin resource sharing (CORS)
- Cross-origin resource sharing (CORS) - Configuration
- MFA Delete
- Server Access Logging
- Amazon S3 Access Point

MODULE 4 - AWS STORAGE EXTRA

- AWS Snow Family
- AWS Snow Family Key Features
- AWS Managed Microsoft AD
- Amazon FSx for Windows File Server
- Amazon FSx for Windows File Server Deployment
- AWS Storage Gateway
- AWS Transfer Family
- AWS Transfer Family Pricing
- WS DataSync
- Data Transfer between AWS Services using DatSync

MODULE 5 - ELASTIC LOAD BALANCER (ELB)

- Elastic Load Balancing
- Deployment of Elastic Load Balancer - Application Load Balancer
- Load Balancer Health Checks
- Load Balancer's Security Group
- Review of Application Load Balancer
- Deregistration delay
- Domain binding with load balancer
- Network Load Balancer
- Cross Zone Load Balancing
- Stickiness

MODULE 6 - AUTO SCALING GROUP (ASG)

- Auto Scaling Overview
- Deployment of Auto Scaling Group
- Automatic Scaling - Scale Out
- Automatic Scaling - Scale In
- EC2 & ELB Health Checks
- Scheduled Actions for scaling in Auto Scaling Group
- Predictive scaling policies
- Master in Fullstack Network Engineer

MODULE 7 - AWS DATABASE SOLUTION

- Relational Database Service (RDS)
- Multi-AZ RDS Deployment
- RDS Connection from Windows
- Amazon Aurora
- Aurora DB Cluster Deployment
- Add reader in Aurora DB Cluster
- Aurora Endpoints
- Parameter Groups
- Create Cross-Region Read Replica
- Aurora Auto Scaling
- Amazon Aurora - Restore, Backtracking & Clone
- Delete Aurora DB Cluster
- Amazon ElastiCache Overview
- Deployment of Redis Cluster - Cluster mode disabled
- Review of Cluster Mode Disabled Replication
- Deployment of Redis Cluster - Cluster mode Enabled
- Memcached Cluster Overview & Deployment
- Memcached Cluster's Information Review

MODULE 8 - AMAZON DYNAMODB

- Amazon DynamoDB Overview
- DynamobDB Partition Key
- DynamoDB Table's Custom Settings
- Dynamo DB Table - Primary Key & TTL
- Amazon DynamoDB Backup
- Dynamo DB Global Table
- DynamobDB Exports & Streams
- Amazon DynamoDB Accelerator (DAX)
- DAX Cluster Overview
- DAX Cluster - Step by Step Deployment
- Global Secondary Indexes
- AWS Cloud
- Master in Fullstack Network Engineer
- See AWS Cloud

MODULE 9 - AWS MONITORING

- What is Cloud Watch Overview
- Cloud Watch Custom Metrix creation
- Collect metrics and logs through Cloud Watch agent
- Log Groups & Log Insights
- Alarm
- Events
- Instance Status Check
- Log Integration with Cloud Watch Log Group
- What is CloudTrail
- What is Trails and how to create Trails
- How to stop logging, update & delete trail
- CloudTrail Lake

MODULE 10 - AWS EVENT BRIDGE

- Amazon EventBridge
- How to create Event Bus and Rule
- How to create EventBridge rule for CloudTrail API calls
- How to create Archive in EventBridge

MODULE 11 - APPLICATION DECOUPLING

- Simple Queue Service (SQS)
- SQS Based Case scenario
- How to create Standard SQS Queue
- Key Points related to Standard SQS Queue
- SQS Queue Visibility Timeout
- SQS FIFO Queue
- Long Polling Vs Short Polling
- Delivery Delay
- Dead-letter queues (DLQ)
- Simple Notification Service (Amazon SNS)
- How to create SNS Topic and Add subscriptions
- Master in Fullstack Network Engineer
- O:..CU'O
- AWS Cloud

MODULE 12 - AMAZON KINESIS

- Amazon Kinesis Data Streams Overview
- Kinesis Data Streams - Technical Terminology
- How to create Kinesis Data Streams & provision Shards
- Amazon Kinesis Data Firehose
- Case scenario for Delivery Stream deployment using Kinesis Data Firehose
- Kinesis Data Firehose - Implementation
- Kinesis Data Stream Vs Kinesis Data Firehose

MODULE 13 - CONTAINER ON AWS

- Amazon Elastic Container Service (Amazon ECS)
- Create ECS Cluster and Task
- Create service for cluster to run task
- Amazon Elastic Container Registry (ECR)
- Deploy image in container from ECR Repository using ECS
- What is Kubernetes and why we need it - Overview
- Kubernetes Cluster Architecture
- Provision an EKS Cluster
- Deploy compute for EKS Cluster
- Connect to EKS Cluster using Kubectl tool
- AWS App Runner
- AWS App Runner Deployment

MODULE 14 - IAM & AWS CLI

- Multi-Factor Authentication (MFA)
- Identity and Access Management (IAM)
- IAM Policy Creation - Using JSON
- AWS Policy Generator
- IAM Role
- AWS CLI Installation on Windows
- AWS CLI Installation on Linux
- Master in Fullstack Network Engineer
- eel...
- AWS Cloud

MODULE 15 - IDENTITY AND ACCESS MANAGEMENT (IAM) - ADVANCED

- AWS Organization
- Add Account in AWS Organization
- Conditions in IAM Policy
- IAM Permission Boundaries
- Policy Evaluation Logic
- IAM Identity Center
- Configuration of IAM Identity Center
- AWS Config - Monitor EC2 Instance for Blacklisted App
- Record configuration change & compliance of security group using AWS Config

MODULE 16 - APPLICATION PROGRAMMING INTERFACE (API)

- What is API
- AWS API Gateway
- How to create API and Methods
- API Cache & Method Throttling

MODULE 17 - DATA & ANALYTICS

- Amazon Athena Overview & Deployment
- Review of Amazon Athena
- Amazon Redshift Overview
- Amazon Redshift Cluster Architecture
- Deployment of Redshift Cluster
- Create Tables in Redshift cluster DB and load data from S3 bucket
- Loading Data in table from Source
- Amazon Redshift Serverless
- Amazon QuickSight
- AWS Glue, AWS Glue Jobs, AWS Glue Triggers
- AWS Lake Formation

- Create Workflow using Blueprint to ingest data in Data Lake
- Master in Fullstack Network Engineer
- AWS Cloud

MODULE 18 - AWS SECURITY AND ENCRYPTION

- AWS Managed Keys
- Customer Managed Keys
- Multi-Region KMS Keys
- Create KMS Key using External Key Material Origin
- Generate Data Key to encrypt-decrypt
- Review Information of Multi-Region Keys

MODULE 19 - DISASTER RECOVERY & MIGRATION

- AWS Elastic Disaster Recovery - Configure & Initialize
- Installation of AWS Replication Agent in Source Server
- Initiate Recovery Job in Disaster

MODULE 20 - SERVERLESS

- Services based on Serverless Architecture
- AWS Lambda Function - Intro & demo
- Lambda Function - How it works
- Upload Lambda Function Logs inside Cloud Watch using IAM Role Permissions
- Lambda Function's Settings
- Configure S3 bucket and DynamoDB with Lambda Function

MODULE 21 - NETWORKING

- Virtual Private Cloud (VPC)
- AWS NAT Gateways
- IP Address
- VPC Peering
- Network Interface

AZURE ADMINISTRATOR

MODULE1- AZURE ARCHITECTURE AND VIRTUAL MACHINE

- Azure Free Trial Account Creation
- Azure Virtual Machine
- Create Windows based Azure VM
- Administrative Task with Azure VM
- How to Delete Azure Resources
- Create Linux Azure VM
- Create your own SSH Keys for Authentication with Azure Linux VM
- High Availability through Availability Zone
- Implementation of Availability Set
- Azure VM SLA with Availability Set & Zone
- Website Hosting on Windows Azure VM
- Azure Virtual Machine Extensions

MODULE 2 –AZURE NETWORKING

- Azure Virtual Network Overview
- How to Create Virtual Network & Subnet
- Private IP Vs Public IP
- Dynamic Assignment Vs Static Assignment
- How to Create a Public IP- Basic Vs Standard SKU
- Security Aspects of Public SKU
- Review of Important Facts about Public IP

MODULE 3 – INTER SITE CONNECTIVITY

- Azure Virtual Network Peering
- Implementation of Virtual Network Peering
- Azure VNet –to
- VNet Connection
- Point to Site(P2S)VPN
- Azure Point to Site Configuration
- System Defined Vs User Defined Route
- Express Route
- Azure Express Route Architecture & Deployment Process

MODULE 4- NETWORK SECURITY

- Network Security Groups(NSG)
- NSG Rule's Conflict Resolution Process
- Restrict Internet Access Using NSG
- NICNSG Options –None ,Basic & Advanced
- Application Security Groups(ASG)
- Deployment of Application Security Groups
- Azure Firewalls
- Block Internet Access using Azure Firewall
- Websites White listing through Azure Firewalls
- Azure Service Endpoints

MODULE 5- AZURE ADMINISTRATION

- Different ways to create resources in Azure
- Azure CLI
- Azure CLI Installation in Linux OS
- Azure Power Shell
- Azure Dashboard
- Azure ARM Templat

MODULE 6- NETWORK TRAFFIC MANAGEMENT

- Azure Load Balancer (Basic SKU)
- Health Probes & Load Balancing Rules
- Standard SKU Load Balancer
- How to add and remove VMs from Load Balancer
- Application Gateways
- Application Gateway Routing Rule Configuration
- Custom Domain Binding with Application Gateway
- Health Probe Configuration with Application Gateway
- SSL Configuration with Application Gateway
- Multi Site Configuration with Application Gateway

MODULE 7- DNS

- DNS
- Azure DNS –Public DNS Zone
- Azure Private DNS Zone

MODULE 8- AZURE STORAGE

- Azure Storage Account
- Azure Storage Account Redundancy –LRS Vs ZRS
- Storage Account Redundancy –Geo –Redundant Storage (GRS)
- Storage Account's Failover Process
- Geo-Zone-Redundant Storage(GZRS)
- Azure Blob Storage
- Blob Storage Operations
- Azure File Share
- Soft Delete & Snapshot of Azure File Share
- Copy Data using A Z Copy
- How to Create ,Attach & Detach Data Disk with VM
- Temporary Storage of Virtual Machine
- How to Create Disk Snapshot
- OS Disk Swap
- Virtual Machine Image Capture

MODULE 9- AZURE FILE SYNC

- Azure File Sync
- Azure File Sync Cloud Tiering
- How to Delete Azure File Sync Resource

MODULE10 –SERVER LESS COMPUTING

- Azure App Services
- Azure App Service Plans
- App Service Plans –Price Calculation & Scaling
- Deployment of App Using FTPS Endpoint

MODULE11 –AZURE BACKUP & RESTORE

- Backup & Restore process of On-Prem Files & Folders in Azure
- Azure File Share Backup & Restore
- Azure Virtual Machine Backup
- Recover VM Disk from Backup
- Restore Files from the Backup
- Restore Virtual Machine

MODULE12 –AZURE MONITOR

- Azure Monitor Overview
- Azure Monitor Alerts
- Azure Log Analytics Workspace
- Connect On -Prem and Other Cloud sasa Source with Workspace
- Diagnostic Settings Configuration for Azure VM
- Diagnostic Setting for Non-Compute Azure Resource
- Deployment of Azure Monitor Agent Using Data Collection Rule
- Benefits of Azure Monitor Agent

MODULE13- AZURE GOVERNANCE

- Azure Management Groups
- Root Management Group & Access Elevation
- How to Create Management Groups and Add Subscription
- Azure Policy
- Azure Policy Assignment for VM Size SKUs Restriction
- Azure Policy Definition
- Create Azure Custom Policy Definitions
- Remediation through Azure Policy

MODULE14- AZURE ACTIVE DIRECTORY

- Active Directory Overview
- Authentication Process with & without Azure AD
- Azure AD Tenant, Directory & Subscription
- Create New Tenant
- Azure AD Users & Groups and Concept of Role Based Access Control (RBAC)
- Custom Domain Binding with Azure AD
- Multi-Factor Authentication(MFA)
- Additional Settings Related to MFA
- Azure AD Connect Overview
- Azure AD Connect Implementation

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DEVOPS MODULES

MODULE 1: BASIC LINUX ESSENTIALS COMMANDS

- 1 Copy, paste, move, creation of files, Editing using vim
- 2 User management: create, delete, manage user
- 3 Permission in Linux, installation of packages using rpm and yum

MODULE 2: GIT – A VERSION CONTROL TOOL

- 1 Knowing about Version control
- 2 Git – A CLI
- 3 Essentials of GIT in industry
- 4 How to setup GIT
 - Installing Git
 - First-Time Git Setup
 - Getting a Git Repository
- 5 Working with various commands in GIT
- 6 Recording Changes to the Repository
 - How to check the Status of Your Files
 - How to track New Files
 - Staging our modified files
 - Ignoring Files from GIT
 - Viewing Your Unstaged and Staged Changes
 - How to commit Your Changes
 - Skipping the Staging Area and commit
 - Removing Files from GIT
- 7 Viewing the Commit History
 - Limiting Log Output
 - Using a GUI to Visualize History
- 8 Undoing Things
 - Changing Your Last Commit
 - Unstaging a Staged File
 - Unmodifying a Modified File

9 Working with Remotes

- Showing Your Remotes
- Adding Remote Repositories
- Fetching and Pulling from Your Remotes
- Pushing to Your Remotes
- Inspecting a Remote
- Removing and Renaming Remotes

10 Branching and Merging in Git

- What a Branch Is
- Basics in Branching and Merging
- Branch Management in GIT
- Branching Workflows and its usage
- Remote Branches – create and delete
- Rebasing

11 Git workflows

12 Git cheat sheet

MODULE 3: JENKINS – CONTINUOUS INTEGRATION

1 Essentials of Continuous Integration

2 An example scenario where CI is used

3 Know about Jenkins and its architecture in detail

4 Jenkins tool Management in detail

5 Installing Jenkins

6 Post-installation setup wizard

- Unlocking Jenkins
- Customizing Jenkins with plugins
- Creating the first administrator user

7 Know about User management in Jenkins

8 Authentication

- Jenkins own database user creation
- Options to enable integration with LDAP

9 Authorization

- Matrix based authorization
- Project based authorization

10 Creating jobs and automatic build settings

- What is Jenkins Pipeline?
- Why Pipeline?
- Integration with GIT
- How to enable project based authorization for a job
- Source code management while creating jobs
- Triggering automated build
- Know about post build options for jobs like notifications, trigger another build, publishing reports, etc.

11 Adding a slave node to Jenkins

12 Building Delivery Pipeline

13 Notification settings in Jenkins

14 Plugin management in Jenkins

MODULE 4: DOCKER – A CONTAINERIZATION TECHNOLOGY

1 Docker Containers Introduction

- What is a Docker
- Use case of Docker
- Platforms for Docker
- Docker vs. Virtualization Architecture

2 Docker Architecture

- Understanding the Docker components

3 Installation

- Installing Docker on Linux
- Docker commands
- Provisioning

4 Docker Hub

- Downloading Docker images by syncing with local system
- Custom configuration of Docker images
- Uploading the images in Docker Registry
- Understanding the containers
- Running commands in container
- Running multiple containers

5 Create Custom images

- Creating a custom image
- Running a container from the custom image. Publishing the custom image

6 Docker Networking

- Accessing containers
- Linking containers
- Exposing container ports
- Container Routing

7 Docker Volume

8 Docker Compose

- Installing The Docker compose
- Terminology in Docker compose
- Setup and Configure WordPress site using Docker compose

MODULE 5: KUBERNETES ADMINISTRATOR

1 Kubernetes Architecture

2 Kubernetes Installation (Master Node and Worker Node)

- Working on manual installation of Kubernetes cluster

3 POD strategy

4 Replication Controller & Deployment

5 Scalability of Application

6 Volume management

7 Networking

8 Resource Management

9 Monitoring and Security

MODULE 6:

- Nagios monitoring setup

MODULE 7:

- Prometheus with Grafana installation on CentOS 7



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THANK YOU!

Thank you for being a part of
this **learning journey**.

Your dedication today
builds the expertise of
tomorrow.



*Keep Learning.
Keep Growing.*



KEEP LEARNING

Stay curious and
keep exploring
new possibilities.



STAY FOCUSED

Consistency today
creates excellence
tomorrow.



KEEP GROWING

Every step forward
brings you closer to
your goals.



ACHIEVE MORE

Your hard work
today shapes your
future success.



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