

ISP Core Router Setup with Juniper Router

Course Outline :

1. Introduction to Juniper Routers and Environment

- Accessing Juniper routers (CLI/GUI)
- Basic navigation of Junos OS
- Understanding Juniper's command-line hierarchy and structure

2. Installing Virtual Juniper Router on a Virtual PC

- Downloading and preparing JunOS images
- Installation process in GNS3/EVE-NG/VirtualBox
- Interface and connectivity verification

3. Basic Configuration Commands on Juniper Routers

- Setting hostname
- Configuring root password
- Creating new user accounts
- Creating and managing VLANs
- Assigning IP addresses to interfaces

- Adding default gateway
- Testing connectivity with ping
- Viewing interface list and assigned IPs
- Displaying running configuration
- Checking the routing table
- Verifying interface/link status
- Viewing remote MAC addresses
- Remote login using Telnet/SSH

4. WAN Configuration for ISP Core Router using Separate

Virtual Routers and VLANs

- Internet upstream configuration (DigiConnect, FNA, CDN, BDIX)
- BGP WAN peer (Receive) configuration
- Core router setup for reseller or ISP upstream receive configuration
- VLAN segmentation for each upstream

5. LAN Configuration and Distribution Setup from ISP Core

Router

- LAN-side BGP peering configuration
- Distribution setup for resellers or client delivery
- VLAN-based service delivery model

- Internet service segmentation and traffic control

6. Static Routing on Juniper Routers

- Adding, modifying, and deleting static routes
- Route prioritization and failover
- Verifying route propagation

7. Configuration Backup and Restore

- Backing up configuration files
- Restoring configurations from backup
- Best practices for configuration version control