INFOSOFT IT SOLUTIONS

Training | Projects | Placements

JUNIPER NETWORKS CERTIFIED INTERNET PROFESSIONAL

Junos Routing Essentials

- Routing policy
- Firewall filters
- Class of Service (CoS)
- Monitoring and troubleshooting
- OSPF (Open Shortest Path First)
  - OSPFv2 and OSPFv3
  - OSPF areas, authentication, and route summarization
- BGP (Border Gateway Protocol)
  - BGP route selection process
  - IBGP and EBGP operation
  - BGP attributes and route manipulation

Junos Switching Essentials

- Virtual LANs (VLANs)
- Spanning Tree Protocols (STP)
  - RSTP (Rapid Spanning Tree Protocol) and MSTP (Multiple Spanning Tree Protocol)
- Port security and authentication
- Virtual Chassis

Junos Security

- Stateful firewall filters
- IPsec VPNs (Virtual Private Networks)
    - IPsec VPN components and operation
    - Implementing and troubleshooting IPsec VPNs
- Network Address Translation (NAT)
- High Availability (HA) clustering

Junos Troubleshooting

- Methodologies and troubleshooting tools
- Troubleshooting routing protocols (OSPF, BGP)
- Troubleshooting MPLS (Multiprotocol Label Switching)
- Troubleshooting Layer 2 switching

Junos Service Provider Routing and Switching

- Intermediate System to Intermediate System (IS-IS)
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    - IS-IS operation and configuration
- MPLS
    - MPLS applications, label-switched paths (LSPs), and MPLS Layer 3 VPNs
- Layer 2 VPNs (L2VPNs) and Layer 3 VPNs (L3VPNs)
    - Provider Edge (PE) routers, Customer Edge (CE) routers, and VPN signa ling

Automation and Programmability

- Junos automation scripting
  - Using SLAX (Junos Script Automation)
  - Using Python scripts for automating Junos

Junos Routing Essentials

- **Routing Policy and Firewall Filters**
  - Application and configuration of routing policies
  - Implementation of firewall filters for security and traffic control
- **Class of Service (CoS)**
  - Understanding and configuring CoS to prioritize traffic flows
  - CoS components: classifiers, schedulers, and drop profiles
- **Monitoring and Troubleshooting**
  - Use of monitoring tools (CLI commands, Junos Space)
  - Troubleshooting techniques for routing issues
- **OSPF (Open Shortest Path First)**
  - OSPFv2 and OSPFv3 fundamentals
  - Configuration and optimization of OSPF areas and route summarization
- **BGP (Border Gateway Protocol)**
  - BGP configuration and troubleshooting
  - BGP attributes and their influence on route selection
  - IBGP and EBGP operation and best practices

Junos Switching Essentials

- **Virtual LANs (VLANs)**
    - VLAN configuration and management
    - VLAN trunking and protocols (802.1Q, native VLAN)
- **Spanning Tree Protocols (STP)**
    - RSTP (Rapid Spanning Tree Protocol) and MSTP (Multiple Spanning Tree Protocol)
    - STP convergence, root bridge election, and port roles
- **Port Security and Authentication**
    - Port security mechanisms (MAC limiting, DHCP snooping, dynamic ARP inspection)
    - 802.1X authentication configuration
- **Virtual Chassis**
    - Configuration and management of Virtual Chassis
    - High availability considerations and best practices

Junos Security

- **Stateful Firewall Filters**
    - Configuration and application of stateful firewall policies
    - Handling of NAT (Network Address Translation)
- **IPsec VPNs (Virtual Private Networks)**
    - IPsec fundamentals and VPN configuration
    - Troubleshooting IPsec VPNs and connectivity issues
- **High Availability (HA) Clustering**
    - Configuration of HA features for redundancy and failover
    - Monitoring and management of HA clusters

Junos Troubleshooting

- **Troubleshooting Methodologies**
  - Systematic approach to identify and resolve network issues
  - Use of Junos troubleshooting tools and utilities
- **Troubleshooting Routing Protocols**
  - Diagnosis and resolution of OSPF and BGP routing problems
  - MPLS troubleshooting and LSP (Label Switched Path) analysis
- **Troubleshooting Layer 2 Switching**
  - Detection and correction of VLAN and STP-related problems
  - Ethernet OAM (Operations, Administration, and Maintenance) troubleshooting

Junos Service Provider Routing and Switching

- **Intermediate System to Intermediate System (IS-IS)**
  - IS-IS protocol operation and configuration
  - IS-IS routing domains and hierarchy
- **MPLS (Multiprotocol Label Switching)**
  - MPLS architecture and components
  - LDP (Label Distribution Protocol) configuration and troubleshooting
- **Layer 2 VPNs (L2VPNs) and Layer 3 VPNs (L3VPNs)**
  - VPN services over MPLS networks
  - Configuration of VPLS (Virtual Private LAN Service) and L3VPN services