

Nisha Mayilraj

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PROFESSIONAL SUMMARY

Network Engineer with 5+ years of experience designing, deploying, managing, and optimizing secure, scalable, and highly available network infrastructures across enterprise and mission-critical environments. Strong expertise in routing and switching, LAN/WAN, TCP/IP, OSPF, EIGRP, BGP, MPLS, VLANs, VPNs, firewalls, and network security, with hands-on experience troubleshooting complex connectivity, routing, and performance issues. Proficient with Cisco IOS/NX-OS, Cisco Packet Tracer, Palo Alto, Fortinet, Juniper, Wireshark, SolarWinds, AWS, Azure, and network automation tools, with a proven ability to improve network availability, security, performance, and operational efficiency while supporting business and compliance requirements.

EDUCATION

Illinois Institute of Technology

Master of Science, *Computer Science*

Aug 2024 - May 2026

Chennai Institute of Technology

Bachelor of Technology, *Electronics and Communication Engineering*

Aug 2018 - May 2022

SKILLS

Programming Languages: Python, Bash, PowerShell

Frameworks & Libraries: Ansible

Databases: Redshift

Tools & Software: Cisco IOS/NX-OS, Cisco Packet Tracer, Juniper JunOS, HP Aruba, Palo Alto Networks, Fortinet Firewalls, Meraki Cloud Networking, Wireshark, SolarWinds, PRTG, Nagios, SNMP, NetFlow, VMware NSX, Cisco DNA Center, ServiceNow Studio, Flow Designer, Endpoint troubleshooting (Windows/macOS)

Cloud Platforms: AWS, Azure, AWS VPC, Direct Connect, Transit Gateway, Azure Virtual Network, ExpressRoute

Soft Skills: Technical Documentation, Problem Solving, Troubleshooting, Incident & Change Management, Service Level Management, Stakeholder Communication

WORK EXPERIENCE

Morgan Stanley | Network Engineer

Aug 2025 - May 2026

- Designed and implemented VLAN segmentation across 1,200+ endpoints, decreasing broadcast domain size, improving internal application response times by 15%, and enhancing security by limiting interdepartmental data exposure for enterprise **desktops** and other endpoints.
- Configured and maintained BGP sessions with 4 upstream ISPs, ensuring 99.99% availability for trading **WAN networks**, and reducing route convergence times from 45 seconds to under 10 seconds during failover events.
- Deployed and configured Palo Alto firewalls across 15 branch offices, applying over 250 refined security policies, reducing unauthorized access attempts by 42%, and ensuring full compliance with internal audit requirements.
- Managed AWS Direct Connect and Azure ExpressRoute for 200+ financial applications, optimizing cross-cloud routing paths, lowering average inter-cloud latency from 28ms to 23ms, and improving transaction processing reliability across **cloud server environments**.
- Automated 65% of routine device configuration tasks using Ansible playbooks, reducing manual change window durations by an average of 25 minutes, while eliminating recurring syntax errors previously seen in manual updates.
- Conducted quarterly network performance baselines using SolarWinds and NetFlow, identifying packet loss trends early and preventing three potential high-impact outages affecting mission-critical trading platforms.

Dell Technologies | Network Engineer

May 2022 - Jul 2024

- Led MPLS-to-SD-WAN migration for 22 remote sites, reducing annual circuit costs by \$85,000, improving application response times by 20%, and enabling centralized control of branch routing policies.
- Configured OSPF and EIGRP routing protocols for 500+ nodes, reducing average failover time from 30 seconds to under 5 seconds, improving VoIP and video conferencing performance during link outages.
- Integrated Fortinet firewalls into centralized SIEM platform, increasing detection accuracy of suspicious traffic patterns by 34%, and improving incident escalation speed by 18% through automated alerting aligned to **ITIL Frameworks** workflows.
- Optimized DHCP and DNS configurations for 2,500+ users, reducing IP address conflicts from 12 per month to under 2, and shortening name resolution times by 27% for core business applications.
- Resolved 98% of high-priority network incidents within SLA using packet analysis via Wireshark, strengthening **IT support** operations by implementing root-cause-driven configuration changes in switching and firewall rules.
- Documented and standardized network change procedures for 18 clients, reducing average onboarding time for new engineers from 10 days to 6 days, and improving change approval rates by 22%.
- Delivered **Level 1/2 support** for end users during network-impacting incidents, triaging tickets, collecting diagnostics, and escalating to network and security teams to restore service within SLA.

Hexaware Technologies | Network Administrator

Jan 2021 - Apr 2022

- Managed LAN/WAN infrastructure supporting 300+ users across three office locations, maintaining 99.8% uptime, and proactively identifying bottlenecks before they impacted daily operations.
- Configured and maintained Cisco switches and routers processing daily traffic of 1.2 Gbps, applying QoS rules to prioritize voice and video traffic for 180 concurrent call sessions.
- Implemented ACL-based restrictions for 120 internal systems, reducing unauthorized access attempts by 60%, and meeting internal compliance audit requirements in full for three consecutive quarters.
- Conducted monthly network baseline analysis, identifying bandwidth bottlenecks and applying routing adjustments that improved average VoIP MOS scores by 22% for all remote offices.

- Reduced average helpdesk resolution time from 14 hours to under 6 hours by introducing standardized troubleshooting scripts and escalation flows for L1 and L2 support teams supporting **laptops**.
- Coordinated firmware updates across 50+ network devices quarterly, preventing vulnerabilities tied to outdated software, and ensuring vendor-recommended patches were applied within 7 days of release.
- Supported endpoint connectivity and access for **Android devices** and **iOS devices** on corporate Wi-Fi and VPN, resolving authentication, DHCP, and routing issues for remote users.

PROJECTS

Virtual Private Network (VPN) | Securing Data Through Encryption During Transmission

- Configured and deployed IPsec site-to-site and remote-access VPNs to provide secure connectivity between remote users, branch locations, and internal network resources.
- Implemented AES encryption, authentication, access control policies, and VPN tunneling to protect sensitive traffic transmitted across public networks.
- Configured Cisco routers and firewalls and validated VPN connectivity, routing, and security policies using Cisco Packet Tracer and Wireshark.
- Troubleshooted VPN tunnel failures, IP addressing, routing, NAT, and connectivity issues, improving connection stability and ensuring reliable remote access.

IT Service Management (ITSM) Portal Development on ServiceNow

- Designed and implemented a customized ITSM portal using ServiceNow to streamline incident, problem, and change management workflows.
- Integrated dynamic forms, SLA tracking, and automated notifications to improve response time and user experience for **Infrastructure management** requests.
- Utilized ServiceNow Studio and Flow Designer to create scalable and maintainable backend logic for service requests.

Cloud Based Data Pipeline for Real-Time Analytics

- Developed a scalable data pipeline using AWS services (S3, Lambda, Glue, and Redshift) to collect, process, and analyze streaming data in real time.
- Implemented ETL workflows to transform raw data into structured formats for business intelligence dashboards.
- Optimized performance and cost-efficiency through serverless architecture and resource automation.

Multi- Authentication ATM Security

- Produced a solution to reduce the record paperwork for most of the labs, at least for the labs that heavily.
- ATM security system using FINGERPRINT and GSM module – Creation of ATM access using fingerprint irrespective of manual ATM card.
- Adding another layer of protection to the ATM by linking the register's cellphone number to fingerprint and one-time password.

CERTIFICATIONS & ACHIEVEMENTS

- CCNA: Cisco Certified Network Associate - Cisco