Contact

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mohamedzayed (LinkedIn)
github.com/mozayed (Other)

Top Skills

NetDevOps

Ansible

Git

Languages

Arabic (Native or Bilingual)

French (Limited Working)

English (Full Professional)

Certifications

VMware Certified Associate - Data
Center Virtualization

Secret Clearence level II

Mohamed Zayed

Network Automation Engineer | Python Developer | Runner
Greater Ottawa Metropolitan Area

Summary

With almost 20 years of progressive IT Infrastructure experience, I
specialize in network architecture, system design, and automation ,
consistently aligning technology solutions with business goals across
diverse industries. My expertise spans network modernization,
performance optimization, and more recently, network automation
and NetDevOps practices.

I m known for delivering robust, scalable network solutions with
clear technical documentation and automation workflows that boost
operational efficiency, standardize procedures, and reduce human
error.

I delivered a range of IT solutions, helping boost network
performance, standardize procedures, raise accountability, and
save the organization money. A few notable qualifications and
achievements:

✓Led a campus-wide network modernization project: Designed and
deployed high-availability Cisco Catalyst and Nexus infrastructure
during the pandemic.
✓Developed a custom network automation platform using Flask and
Python, integrating Netmiko, PyATS, NetConf and RESTCONF to
manage multi-vendor devices.
✓Implemented a full NetDevOps pipeline: Built a network source-
of-truth Git repository and an end-to-end CI/CD pipeline to test,
validate, and deploy configuration changes automatically
✓Enhanced visibility with a streaming telemetry solution (Telegraf,
InfluxDB, Grafana), supporting proactive network monitoring.
✓ Built a PyATS-powered Model Context Protocol (MCP) server:
Integrated with a Large Language Model (LLM) AI agent to interpret
natural language queries, check network state via PyATS, and
trigger automated pipelines for validated network changes
✓Conducted remote monitoring, troubleshooting, and network
management for 300+ managed clients across North America.

I'm currently focused on AI-powered network agents, actively researching and prototyping intelligent agents that integrate with PyATS and Model Context Protocol (MCP) to close the loop between observation and action. By leveraging natural language interfaces, model-driven telemetry, and automation pipelines, my goal is to make network infrastructure more autonomous, adaptive, and secure.

Technical expertise includes: Cisco Catalyst & Nexus • Cisco Meraki • Cisco ASA & Firepower • FortiGate • REST API • Python • JSON • YAML • YANG Data Models • RESTCONF • NETCONF • PyATS • Git •Netmiko • Ansible • Linux • Jinja2 • Flask • OpenAPI standards • Docker

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Experience

Government of Canada
IT Network Analyst
January 2019 - Present (6 years 5 months)
Ottawa, Canada Area

Pembroke MDF Inc.
Network Administrator
May 2017 - May 2018 (1 year 1 month)
Ottawa, Canada Area

Oversee daily monitoring and management of entire plant manufacturer's network infrastructure.   Managed all aspects of system configuration, installations, design, troubleshooting, and maintenance. Provide regular reporting to IT manager. Manage network security, firewalls, hardware, software, and the VoIP telephony system.

Cisco Network Infrastructure Management & Operations:

Defined and documented all functional requirements and network design – providing the organization with its very first, clear outline of network setup and design to support business decisions and direction.

Analyzed current network setup in relation to organizational future requirements and designed and implemented Cisco 3850X Stack solution to improve performance and scalability.

Improved information security to protect the business from malicious activity and attacks by installing new highly available Cisco ASA firewalls and firepower module to control / monitor external traffic.

Fully Managed by TELUS Business
L2 Network Engineer
September 2015 - May 2017 (1 year 9 months)
Ottawa, Canada Area

Directed remote monitoring, troubleshooting, and network & server management of 300+ managed clients across North America. Provided support on escalated tickets from L1 help desk. Coordinated IT upgrade projects.

Remote Network Management:

#Supported multiple migration projects for clients, including Exchange on premise to Office 365, network switches & firewall upgrades, spam filter implementations, and VMware implementations and upgrades.

#Analyzed client network setup and documentations, updating outstanding materials to ensure easier troubleshooting and faster problem resolution.

Dana Petroleum PLC
9 years 5 months

Senior Systems Administrator
March 2013 - August 2015 (2 years 6 months)
Cairo, Egypt

Promoted to direct installation, configuration, deployment, and support of all back office infrastructure for all premises and facilities around the world for this multi-national, billon-dollar organization. Provided administration, support, and maintenance of clients services, including active director, network file & print services, email services, application services, remote access, and access authentication.

Network Infrastructure Management & Operations:

#Planned and implemented non-disruptive upgrade of NetApp SAN storage, providing standardized and more stable data storage and support during time of rapid company growth.

#Produced system performance and capacity statistics, diagnostic information, and "as built" documentation for all supported infrastructure.

#Delivered significant cost-savings while reducing footprint by implementing new virtual server environment.

Information Technology Specialist
April 2006 - March 2013 (7 years)
Cairo, Egypt

Managed and monitored local site server and network infrastructure after Dana acquired Devon Energy's assets. Provided technical support and assistance to determine and resolve complex IT faults or issues within client systems. Implemented multiple server and network upgrades.

Devon Energy
IT Specialist
2006 - 2007 (1 year)

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Education

Cairo University
Bachelor's degree, Actuarial Sciences · (2002)