Haruna Adoga, PhD

Glasgow, UK.

Networks | HPC Systems | Cloud | Research & Development

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About

Haruna Adoga has over ten years of experience in systems and network engineering, focusing on Cloud and HPC systems automation. He has experience and training as a researcher in computing science, with research endeavours in systems and high-performance computing and virtual network management. He is an active member of the IEEE Communications Society, the British Computer Society (BCS), and the Institution of Engineering and Technology (IET).

Work Experience

HPC Systems Engineer - Research Computing
August 2023 – Present

University of Sussex, England

- Design of a private cloud HPC infrastructure for Research Computing
- Collaborating with industry and research experts in delivering tailored HPC solutions
- Providing design and technical support in troubleshooting problems with HPC clusters and Linux systems
- Carrying out upgrades, migration and applying security patches on Linux/Unix systems, compute, storage and networking
- Hands-on experience with HPC management and monitoring tools: Prometheus SNMP, Nagios, perfSONAR

Tutor & Graduate Assistant
Feb 2021 – August 2023

University of Glasgow, Scotland

- Providing technical support in troubleshooting problems with HPC clusters and Linux systems
- Carrying out upgrades and applying security patches on Linux/Unix systems
- Performing Linux/UNIX system administration and design, including storage and web server hosting with Nginx
- Practical and theoretical teaching of Information Technology course for MSc – Web development with Python (Django framework)
- Working as a marking assistant to help with grading undergraduate and postgraduate students' assessments

Networks & Systems Engineer
November 2016 – Present

Freelance

- Troubleshooting network devices, e.g., Cisco Routers/Switches and computer hardware
- Proficient in using the Linux command prompt
- Networks, Linux and Windows server administration
- Designing and managing Cisco networks for LAN & WAN connectivity
- Performing Cloud infrastructure monitoring and configuration

University Lecturer - Systems Engineer
May 2012 – January 2020

Federal University of Lafia, Nigeria

- Delivering lectures in computer programming using Python and Java
- Presenting theoretical and practical lectures on networks, distributed systems, and system administration
- Assisting with routine systems maintenance by managing updates and patches
- Leading troubleshooting efforts on Windows, Mac and Linux servers
- Teaching undergraduate and postgraduate diploma students courses in networking and programming

Technical Support Specialist
April 2011 – May 2012

Airtel Telecommunications, Abuja, Nigeria

- Actively processing technical service requests from Airtel subscribers
- Served as a tier 1 skilled service desk personnel in incident management
- Carried out hierarchical escalation to tier 2 support engineers for resolution
- Proffered solutions to subscribers to resolve service disruptions, based on SLA

Education

University of Glasgow   Glasgow, UK
PhD. Computing Science   *Jan 2020 to May 2024*

University of Hertfordshire   Hertfordshire, UK
MSc. Computing Science   *July 2014 to Jan 2016*

University of Maiduguri   Maiduguri, Nigeria
Beng. E & E Engineering   *April 2004 to Dec 2009*

Skills Summary

Research and Industry Certifications : Scientific paper reviews, Cisco CCNA, CCNP, AWS Cloud Practitioner
Networking and Systems : LAN, HPC, WAN, VPC, NFV, InfiniBand, BGP, Switching, RedHat, Kali, Ubuntu, Routing
Development Tools/Languages: Python, Bash, Git, Docker, Django AWS, Ansible, Terraform, Xcat, SLURM
Applications/Libraries: Wireshark, VMWare, Gurobi, KVM, NetworkX, Numpy, Matplotlib, Scapy, NMAP
Project Management: Trello, Jira, ITIL

IT Certifications and Professional Memberships

British Computer Society (BCS)   2022 - present
BCS, UK

Amazon Web Services (AWS) Cloud Practitioner   July 2022
Amazon Inc.

Cisco Certified Network Professional (CCNP R & S)   Feb 2011 - Expired
Cisco Systems

Selected Personal Projects

OpenStack Private HPC Cloud | *Compute, Networks, Storage, High-performance*   Nov 2023 - present
  ∗ Design and deployment of OpenStack Cloud
  ∗ Linux Operating Systems upgrades and migration
  ∗ KVM server virtualization and network performance measurements

Testbed design and evaluation of NFV Platforms | *SDN, NFV, UNIX, OpenFlow, Docker*   June 2022
  ∗ Carried out the performance evaluation of commonly used virtual network functions in ISP environments
  ∗ Real testbed design on commodity servers (UNIX) for hosting network functionalities
  ∗ KVM server virtualization

Hybrid Network Functions Deployment on Commodity Servers | *Routing, Firewall, IDS*   2020 - 2021
  ∗ Virtualization, Switching, stateful and stateless firewall deployments

Network and Server Penetration Testing | *Unix, Windows, Server Security*   November 2016
  ∗ Carried out a complete pentest lifecycle on a LAN with Linux & Windows Servers

Selected Research Publications | *NFV, Switching, UNIX, Virtualization, Containers*

Leveraging NFV Heterogeneity at the Network Edge   Jan 2024
PhD Thesis, University of Glasgow <u>*View publication*</u>   *United Kingdom*

Latency-aware vNF Placement on Heterogeneous Hosts at the Network Edge   Dec 2023
IEEE Global Communications Conference – <u>View publication</u>   *Kuala Lumpur, Malaysia*

Performance Evaluation of Virtual Network Functions   July 2022

IEEE Network Softwarization Conference – View publication   *Milan, Italy*

Network Function Virtualization Frameworks: Review of Challenges   Feb 2022

MDPI Future Internet Journal – View publication   *Basel, Switzerland*

Service and Volunteering

University of Glasgow   May 2021 – May 2022

School of Computing Science Systems Section Seminars
* Scheduling and hosting weekly seminars for the Systems research group

IEEE Journal   February 2021 – Present

Journal reviewer
* Reviewing conference and journal articles for the IEEE

AFRINIC   May 2018 – Present

Policy Development Working Group Member

* Developing and discussing a number of resource policy proposals that AFRINIC implements towards distributing IPv4, IPv6 and ASN resources in Africa.

YouTube   2014 – Present

Hands-on tech tutorials

* I present hands-on videos on various aspects of Information Technology, emphasising Linux Server Administration, Windows, Networks and Automation. – View YouTube Channel