# Haruna Umar Adoga

Glasgow, UK. Networks | HPC Systems | Cloud

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#### ABOUT

Haruna Adoga has over eight years of experience in Linux systems and network engineering. He has experience and training as a researcher in computing science, focusing on systems and high-performance computing network management.

#### Experience - IT

#### Technical Research Support: Linux and HPC

Feb 2021 – Present

University of Glasgow School of Computing Science (Part-time)

- Providing technical support in troubleshooting problems with HPC clusters, and Linux systems
- Carrying out upgrades and applying security patches on Linux/Unix systems
- MPI parallel programming experience
- Web application development with Python (Django framework)
- Using Python for data science and research, using relevant libraries: Scapy, NetworkX, Requests, Pandas etc.
- Performing Linux/UNIX system administration and design, including storage and web server hosting with Nginx
- Hands-on experience with management and monitoring tools: SNMP, Nagios, IPMI
- Hands-on experience with monitoring HPC clusters using Icinga2

#### 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
- Carrying out infrastructure migration to AWS Cloud
- Performing Cloud infrastructure monitoring and configuration
- Hands-on experience with network cabling and Ethernet Switches/Routers

#### Senior Linux Systems Engineer

Sept. 2014 – December 2019

Federal University Lafia

- Hands-on experience with parallel storage file systems: Ceph, Gluster and Lustre
- Carrying out Linux/UNIX system administration managing user accounts, services and storage mounts, RAID, NFS exports
- Hands-on experience with the configuration and troubleshooting of Cisco routers and switches for LAN/WAN connectivity
- Carrying out routine systems maintenance by managing updates and patches
- Hands-on Linux system administration skill with managing services: DNS, DHCPd, chronyd, NFS, Vsftpd, Postfix, Samba, Apache, Nginx
- Hands-on skill with Ansible Automation to deploy Linux system services

#### **Technical Support Specialist**

March 2011 - May 2012

Airtel Telecommunications

- 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

# Experience - University Teaching

#### University of Glasgow

January 2020 – Present

Researcher & Graduate Teaching Assistant (Part-time)

- Tutoring undergraduate students on Human-Computer Interaction and Information Management
- Tutoring level 2 students on Networks and Operating Systems Essentials 2
- Providing technical support to students in troubleshooting problems with Windows, Mac/Unix, and Linux systems
- Assisting with the marking of coursework and examination for MSc level and undergraduate courses
- Teaching practical aspects of advanced programming using Python for MSc students
- 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

#### Federal University of Lafia

May 2012 – Dec 2019

Lecturer

- Delivering lectures in computer programming using Python and Java
- Presenting theoretical and practical lectures on networks, distributed systems, and system administration
- Carrying out Linux/UNIX system administration
- Assisting with routine systems maintenance by managing updates and patches
- Helping students and staff with troubleshooting Windows, Mac, Linux, and Mobile related tasks
- Teaching undergraduate and postgraduate diploma students courses in networking and programming
- Designing and configuring networks for LAN and WLAN access

#### Education

#### University of Glasgow

Glasgow, UK

PhD. Computing Science

Jan 2020 to March 2024

#### University of Hertfordshire

Hertfordshire, UK

MSc. Computing Science

July 2014 to Jan 2016

#### University of Maiduguri

Maiduguri, Nigeria

Beng. E & Engineering

April 2004 to Dec 2009

#### Technical Skills Summary

Programming & Scripting: Python, Bash, HTML, CSS, SQL

Cloud & Configuration Management : AWS, Ansible, Terraform

Networking: LAN, WAN, VPC, NFV, SDN, BGP, OSPF, Switching, NAT, Routing & VxLANS, Spine-Leaf

Operating Systems: RedHat Linux 8, Ubuntu Server, CentOS 7 & 8, Kali Linux, macOS, Windows

**Security**: ACLs, Snort IDS, Active Directory

Developer Tools/Frameworks: Git, Docker, Django

**Applications**: Wireshark, VMWare, KVM, VirtualBox, MS Visio, MS Project, Overleaf **Libraries**: NetworkX, Requests, Numpy, Matplotlib, Scapy, Selenium, Beautiful Soup, Scrapy

#### IT Certifications and Professional Memberships

# RedHat Certified Systems Administrator (RHCSA)

In View

RedHat Inc.

#### Amazon Web Services (AWS) Cloud Practitioner

July 2022

Amazon Inc.

#### Cisco Certified Network Professional (CCNP R & S)

Feb 2011 - Expired

Cisco Systems

# British Computer Society (BCS)

2022 - present

BCS, UK

# Institute of Electrical and Electronics Engineers (IEEE) No: 92735619

2014 - present

IEEE, USA

# Awards, Honours and Scholarships

Postgraduate research scholarship:

January 2023

School of Computing Science, University of Glasgow, UK

Open Access Publication grant:

February 2022

UKRI - University of Glasgow, UK

IEEE Netsoft 2022 Italy registration:

July 2022

School of Computing Science, University of Glasgow

PhD full scholarship award:

January 2020

PTDF Overseas Scholarship Scheme for PhD at the University of Glasgow, UK

MSc full scholarship award:

September 2014

TetFUND Foreign Scholarship Award for MSc at the University of Hertfordshire, UK

# Selected Personal Projects

Testbed design and evaluation of NFV Platforms | SDN, NFV, UNIX, OpenFlow, Docker

June 2021

- 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

September 2020

• 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

# 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 group

**IEEE Journal** 

February 2021 – Present

 $Journal\ reviewer$ 

• Reviewing conference and journal articles for the IEEE

#### SCOttish Networking Event (SCONE)

January 2020 - Present

Member and regular participant

• A gathering of networking and systems researchers in and around Scotland

**AFRINIC**Policy Development Working Group Member

May 2018 – Present

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

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

# Latency-aware vNF Placement on Heterogeneous Hosts at the Network Edge

Dec 2023

 $IEEE\ Global\ Communications\ Conference\ -\ \underline{View\ publication}$ 

Performance Evaluation of Virtual Network Functions

Kuala Lumpur, Malaysia 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