QUADRI BAKRE

NETWORK & AV SYSTEMS ENGINEER

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PROFILE

Network and AV systems engineer with ten years of hands-on experience in the UK and Nigeria, currently Senior Systems Commissioning, Testing & QA Engineer at Equippd Limited. My day-to-day work is AV system programming, control integration, commissioning, and network design, configuration and troubleshooting for high-end residential properties and private yachts: segmented VLAN networks, Layer 3 switching, enterprise Wi-Fi and dual-WAN internet, with the multicast, QoS and clocking that AV-over-IP and control systems depend on.

On a typical project the AV design is produced by a colleague; I design the network, then configure, program and commission both the network and the AV and control systems, and hand over as-built documentation and configuration backups. Creator of Afara, a Python commissioning and monitoring tool I've used on projects in my current role at Equippd. ITIL 4 Foundation and Dante Level 2 certified.

CORE TECHNICAL COMPETENCIES

- **Network design and implementation:** VLAN segmentation and IP addressing plans, inter-VLAN routing on Layer 3 switches, DHCP scopes and reservations, 802.1Q trunking, MST spanning tree, loop protection, PoE power budgeting.
- **Multicast and AV-over-IP:** IGMP snooping and querier design, unregistered multicast filtering, QoS (802.1p trust), PTPv2 clocking, Dante, AES67, Crestron DM NAX.
- **Wireless and WAN:** Ruckus, Ubiquiti UniFi and Aruba enterprise Wi-Fi; coverage surveys and roaming tests; dual-WAN failover on Pepwave; Starlink (land and marine); DrayTek routers.
- **Network security:** guest isolation with ACLs, separation of CCTV, AV and control traffic, firewall and VPN configuration on WatchGuard and DrayTek, SSH-only device management, configuration backups.
- **Network hardware:** Cisco Catalyst 1300 and CBS350, Netgear M4250 AV Line, Ruckus, Ubiquiti UniFi, Aruba, Pepwave, DrayTek, WatchGuard.
- **Testing, troubleshooting and documentation:** structured commissioning test schedules, fault isolation across switching, Wi-Fi, WAN and AV streams, interface error analysis, as-built records, IP schedules, topology and connectivity drawings.
- **Automation and scripting:** Python, Netmiko, Paramiko, FastAPI, Git, Docker.
- **AV and control systems:** Crestron (Crestron Home, CP4-R, DM NAX), Control4, Loxone, Lutron QSx/RA2/RA3, QSC, Hikvision CCTV, access control, HVAC integration.
- **Service management:** ITIL 4 practices: incident, problem and change management.

PROFESSIONAL EXPERIENCE

Equippd Limited · Surrey, UK — Mar 2024 – Present

Senior Systems Commissioning, Testing & QA Engineer — Jan 2026 – Present

AV Engineer — Mar 2024 – Dec 2025

Systems integrator delivering networks, AV and control for high-end residential properties and private yachts.

- Design the network for each project alongside the AV designer: VLAN and IP addressing plans, Layer 3 core switching, DHCP, Wi-Fi and WAN.
- Configure Cisco, Netgear, Ruckus, Ubiquiti UniFi, Aruba, Pepwave, DrayTek and WatchGuard equipment, including trunking, spanning tree, PoE, and the multicast and QoS settings needed by Dante, Crestron NAX and AirPlay.
- Secure client networks by isolating guest traffic with ACLs, separating CCTV, AV and control traffic onto their own VLANs, and configuring firewall rules and VPNs on WatchGuard and DrayTek.
- Diagnose and resolve network and connectivity faults across switching, Wi-Fi, WAN and AV-over-IP streams during installation and commissioning.
- Commission network, AV and control systems against structured test schedules covering DHCP, guest isolation, WAN failover, Wi-Fi coverage and roaming, spanning tree, PoE, IGMP and PTP clocking.
- Produce as-built commissioning records, IP schedules, topology drawings and configuration backups for each handover.
- Program and commission Crestron Home, Control4 and Lutron systems and integrate HVAC controls (Polarbear, Heatmiser).
- Pre-configure network switches and build equipment racks off-site before deployment, keeping high and low voltage separated.
- Train clients on their systems at handover.
- Developed Afara, an automated network audit and commissioning tool, used on Equippd projects.

Cloudtoch Integrations · Lagos, Nigeria Sep 2019 – Aug 2023
Audiovisual (AV) and IT Engineer

- Installed, configured and commissioned wired and wireless networks and structured data cabling for integrated AV and smart-home projects.
- Integrated AV, control and automation systems (Control4, Crestron, Loxone) onto client IP networks.
- Carried out site network surveys and prepared technical specifications and cost estimates for proposals.
- Diagnosed and resolved network and AV faults on site to restore service and reduce downtime.
- Completed pre-commissioning work: cable terminations, cable testing and rack builds.

Teqnobit Solutions · Lagos, Nigeria Jun 2016 – Aug 2019
Senior AV Technician

- Led on-site installation teams across residential estates, hotels and multi-room conference facilities.
- Designed structured cabling layouts and built equipment racks.
- Diagnosed network and AV faults during installations.
- Ran quality checks and planned preventive maintenance schedules.

Tolani Nigeria Enterprises · Lagos, Nigeria Dec 2014 – Apr 2016
Technical Sales Assistant

- Sold technology products, advised clients on choosing the right equipment for their needs and kept stock records.

SELECTED PROJECTS

Private yacht: AV and network design and commissioning

Commissioning engineer: network design, configuration, testing and handover; AV and control commissioning.

- One converged network for multi-zone audio, control, TV and owner and guest internet, with satellite failover.
- Cisco Layer 3 core with inter-VLAN routing and DHCP for the Home, Guest, AV-over-IP and Crestron NAX VLANs; dedicated Netgear AV switch; eight PoE edge switches in the cabins.
- Nine Ruckus access points for owner and guest Wi-Fi; Pepwave router with two Starlink services (land and marine).
- Four Crestron DM NAX units and eight Dante-enabled amplifiers on AES67/Dante with PTPv2 clocking, controlled by a Crestron CP4-R.
- 18-point commissioning schedule, including a 30-minute dropout test and switch power-cycle recovery; all tests passed. Handed over with configuration backups, a topology drawing and an as-built record.
- Case study: quadribakre.com/projects/private-yacht-network

Residential AV and network commissioning

Mostly high-end private residences. On each project I design the network around the AV design, then configure, program and commission network, AV and control together: core and edge switching, whole-house enterprise Wi-Fi, VLANs for AV, control, CCTV and guest access, multicast for AV-over-IP, firewall and VPN on WatchGuard or DrayTek, and full commissioning documentation. Case study: quadribakre.com/residential_av_rack.html

Afara: automated commissioning, audit and monitoring tool (personal project, used in my current role at Equippd to streamline commissioning)

Sole designer and developer. Version 1 was used on the projects I work on; version 2 is in development, with beta testing ongoing.

- Version 1: Python and FastAPI application that logged into network and AV devices over SSH and HTTP (Netmiko, Paramiko) across Cisco, Netgear, Ruckus, DrayTek, Crestron, Hikvision, Loxone, Gude and Windows; audited firmware, VLANs, PoE budgets and interface errors; backed up configurations; drew a live topology map; and produced PDF and Word commissioning reports.
- Version 2: rebuilt as an always-on platform. The asset register is checked for mistakes before it is saved; sign-in and an activity record; device passwords never stored and uploaded registers encrypted; monitoring with device history and project dashboards, running on a locked-down hub. Python, PostgreSQL and Docker, with automatic tests on Linux, Mac and Windows.
- Source code in a private GitHub repository; available to review on request.
- Case study: quadribakre.com/projects/afara

CERTIFICATIONS AND TRAINING

Networking, IT and AV-over-IP

- ITIL 4 Foundation in IT Service Management, PeopleCert
- Dante Certification Level 2, Audinate

AV and control systems

- Crestron Commercial and Residential Design Certifications
- Crestron Commercial and Residential Technician Certifications
- Control4 Associate Installer
- AVIXA AV Technologist Certificate
- QSC
- Loxone Qualification Training
- Crestron Programming
- Control4 Automation Programmer

Training

- CEDIA Fibre Termination Training
- AVIXA AV Infrastructure Essentials
- AVIXA Microsoft Teams Rooms Training

Site safety

- IPAF Powered Access Operator, categories 3a and 3b
- ECS card holder

EDUCATION

B.Tech, Urban and Regional Planning · Federal University of Technology, Akure, Nigeria 2014

ADDITIONAL INFORMATION

Experienced in working in occupied private residences, to client confidentiality requirements. Full UK driving licence. Certificates available to verify on request.