



Leadership Profile — Christopher Johnson, CTO

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Christopher Johnson

CTO, Merica Tech LLC | CTO & Co-Founder, Whoz Next LLC

PROFESSIONAL PROFILE

Christopher Johnson brings 30+ years of hands-on experience across eight core engineering and technology domains: **network architecture & cybersecurity**, **data center infrastructure**, **security compliance & audit**, **industrial automation & controls**, **defense R&D**, **AI/ML & full-stack software development**, **commercial AV/IT systems integration**, and **electronics & IoT**. Each of these represents active, billable expertise backed by verifiable project history, production deployments, patents, and published research—not academic familiarity. Two degrees, both earned with a 4.0 GPA. Three provisional patents filed. Published defense researcher (DOTC). Biometrics capstone research adopted as university CS curriculum for over a decade.

DATA CENTER & NETWORK INFRASTRUCTURE

- **Structured Cabling & Fiber:** Cat5e/Cat6/Cat6A copper, single-mode and multi-mode fiber, fiber termination, cable certification, pathway design, cable tray and ladder rack, J-hook systems, labeling standards, as-built documentation. Dark fiber remediation and deployment. Wave circuit experience.
- **Rack Builds & Power:** Server rack assembly, patch panel termination, cable management, power distribution (PDU), UPS integration, hot/cold aisle configuration, overhead and underfloor routing
- **Core Switching & Routing:** Cisco Catalyst/Nexus, Cisco Meraki (including Cisco-to-Meraki migrations and API-driven management), Palo Alto, Fortinet, MikroTik (RouterOS, CRS). OSPF, BGP, EIGRP, spanning tree, VLAN trunking, port-channel/LAG, layer 3 inter-VLAN routing
- **Wireless Infrastructure:** Cisco Meraki (cloud-managed, API integration, large-scale migrations), Ubiquiti UniFi, MikroTik wireless, point-to-point microwave, Air Fiber backbone deployments over miles of terrain, site surveys, heat mapping
- **VoIP & Unified Communications:** On-premise VoIP server deployment and administration, VoIP rollouts across enterprise environments (Murphy USA 1,700+ locations)
- **Commissioning & Handoff:** Full system commissioning, end-to-end testing, punch list resolution, as-built documentation packages, client training and operational handoff
- **13-Mile Air Fiber Bridge:** Designed and deployed secure campus data transport over 13 miles for defense manufacturing facility using Ubiquiti Air Fiber backbone

NETWORK SECURITY & ENGINEERING

- **Firewalls:** Palo Alto NGFW with Panorama centralized management, GlobalProtect VPN, threat prevention profiles, URL filtering, SSL decryption policy. Fortinet FortiGate fabric with FortiManager, IPsec VPN, SD-WAN. Cisco ASA/FTD. MikroTik RouterOS firewall rules and NAT
- **Zero-Trust Architecture:** Greenfield FortiGate fabric builds with full PKI lifecycle management, certificate-based device and user authentication, microsegmentation, least-privilege access policies

- **Enterprise Scale:** Architect, lead engineer, and hands-on implementer for Palo Alto Panorama deployment across 1,700+ retail locations (Murphy USA). Designed IP schema, firewall rules, IPsec tunnels, microsegmentation for acquisition onboarding (QuikChek). Coordinated Dover Systems and Hughes for execution while personally executing firewall changes during maintenance windows in Panorama. OSPF/BGP routing, VLAN architecture, NAC, 802.1X. PCI compliance across all locations
- **VPN & Remote Access:** GlobalProtect, FortiClient, IPsec site-to-site, SSL VPN, split tunnel, conditional access policies. Branch WAN connectivity for distributed workforce
- **Incident Response:** Primary cybersecurity event responder at defense manufacturing facility. IAM, SIEM, log analysis, forensics, incident timeline construction, root cause analysis
- **Greenfield Builds:** Built Whitesign's entire network and security infrastructure from zero—branch WAN, VPN, firewalls, Zero-Trust, PKI, the whole stack. Designed, built, secured, handed over.

SECURITY COMPLIANCE & AUDIT

- **CMMC (Cybersecurity Maturity Model Certification):** Implementation team member at DoD defense manufacturing facility. Artifact collection, control mapping, documentation, audit preparation and support across 7 USG oversight agencies including Department of Homeland Security
- **FISMA / NIST 800-171:** Direct implementation of security controls in practice—not paper exercises. Authored all CUI (Controlled Unclassified Information) handling policy. Revamped all physical and logical security controls. Enabled FIPS 140-2 compliance mode across facility systems and managed the resulting remediation—including resolving cascading authentication failures across engineering platforms
- **PCI DSS:** Compliance enforcement across 1,700+ retail locations at Murphy USA. Network segmentation, firewall rule validation, access logging, vulnerability management
- **UL 2050:** National industrial security custodian for alarm systems protecting classified materials and explosive ordnance. Federal audit readiness, documentation discipline, sensor/contact/communication path certification
- **IT Forensics:** Studied as part of Network Security degree at University of Advancing Technology. Evidence collection, chain of custody, log analysis, incident reconstruction

DEFENSE MANUFACTURING, R&D & INDUSTRIAL AUTOMATION

Day & Zimmermann / Lone Star Ammunition Plant (2012–2023): Controls Engineer → Lead Infrastructure Engineer → Interim Director of Engineering. Plant-level authority for IT, network, security, and industrial automation under multi-agency federal oversight. Named to three separate succession plans: IT Director, Engineering Director, and Plant Manager. Winner of the 2015 Betterment Award—awarded to a single individual across the entire company of 43,000+ employees. Received a standing ovation from the plant workforce upon full-time appointment—a first in the facility's history.

- Created the first and only accurate network map of the entire facility—labeled every drop, every node, documented the complete cable plant. No prior documentation existed
- Upgraded backbone to 10GB dark fiber; upgraded all core switches; located and coordinated repair of bad fiber runs across campus
- Hardened all servers; cleaned up and reorganized the entire cable plant with proper labeling standards
- Implemented SolarWinds network monitoring and management across the facility
- Automated routine IT operations while simultaneously driving CMMC compliance—both tracks running in parallel
- Worked directly with corporate infrastructure manager and engineer as boots-on-the-ground liaison to develop CMMC implementation strategy and improve end-user service delivery across the facility
- Completed enterprise-wide Windows XP to Windows 7 migration
- Modernized the general monitoring station by writing custom software that integrated all disparate security, safety, and operational systems into a single interface

- Authored and won proposals for work D&Z had never previously been awarded
- Secured approval for full replacement of antiquated physical security systems
- Automated M67 grenade production: Staubli robotics, Cognex vision (27 images/1.4s, sub-mm accuracy), Wago PLCs, Toledo scales. **Every M67 produced since 2013 passed through systems he designed**
- **Machine Vision & Inspection:** Cognex In-Sight, Keyence, and Sick vision systems. Designed and programmed multi-camera inspection stations for dimensional verification, defect detection, pass/fail sorting in high-speed production environments
- **PLC & Controls:** Allen-Bradley PLC-5, SLC-500, ControlLogix, CompactLogix; Wago 750-series. Ladder logic, structured text, function block programming. Modernized legacy PLC-5 to modern platforms. Trained under Larry Baxter before assuming full plant controls authority
- Wonderware SCADA; Ethernet/IP, Modbus TCP, DeviceNet, proprietary protocol integration
- Lead azide production processes; torque automation; fuze unboxing systems; ADR X-ray inspection
- DI water treatment; blast wall validation with Franklin Engineering
- **Lead Engineer, M1061 Enhanced Lethality Mortar Program:** Inherited a failing program after previous lead could not deliver. Managed IMS with 1,800+ subtasks and \$4M budget under direct USG oversight. Filled multiple concurrent roles across network design, program management, engineering, and budget oversight. Designed experiments from proof-of-concept through production—resurrected and programmed an antique China Lake high shear mixer reactor in real time during live explosive fill operations. Successfully produced multiple lots of advanced mortar rounds featuring LCP (liquid crystal polymer) fragmentation matrix with vacuum-cast PBXN-110 explosive fills. Passed Factory Acceptance Testing (FAT). Program ultimately discontinued by USG due to cost and manufacturing complexity of their design—not production failure. Involved in program IP patent work.
- **DOTC White Papers:** Greenlighted, authored, accepted, and published. Projects funded from his research.
- Honeywell Vindicator certified; Axis fire control cameras at burning grounds with 5G MIMO backhaul

COMMERCIAL AV/IT SYSTEMS INTEGRATION

- **Clayton Homes (Berkshire Hathaway):** Multi-location AV—Atlas IED BlueBridge DSP, J-Tech Digital HDMI matrix, Shure mics, PoE infrastructure, tablet control, rack builds, commissioning
- **Fire Station & Police Station AV:** Alerting systems, briefing room AV, network-integrated comms across Dallas, Longview, Memphis, Shreveport
- **Conference & Presentation:** Teams Rooms, DSP, multi-zone audio, video distribution, wireless presentation, structured cabling design
- **Surveillance & Security:** Axis cameras, NVR, access control integration, remote monitoring

AI/ML ENGINEERING & FULL-STACK DEVELOPMENT

420 hours formal programming (machine language through Python/.NET). Built and deployed 14 production AI service pipelines. Full-stack: React/Next.js, Python/Node.js, PostgreSQL/MongoDB, Docker, Nginx, CI/CD. Linux since early 1990s.

- **SMIS (Smart Market Intelligence System):** 14 interconnected AI services in production—ML models, vector stores, sentiment analysis, portfolio management, real-time market intelligence with xAI Grok live search integration, persistent memory, user authentication, structured change management. Webhook-integrated Slack alerting.
- **MIDI Studio Pro (fabricat3.com):** Production SaaS—converts AI-generated MIDI to playable guitar tablature with tuning-aware transposition and human playability optimization
- **AI-Assisted RFP Discovery:** Automated bid qualification, scoring, risk assessment, and opportunity filtering
- **Project INTERCEDE:** IoT monitoring—opto-isolated signal capture from gaming hardware, NFC user authentication, configurable timeout controls, DIN rail mounting, secure telemetry (provisional patent filed)

- **Unity Game Development:** Casino games built for 20 commercial kiosks (Whoz Next LLC)
- **LLM Integration:** OpenAI Assistants API with vector stores for persistent learning, Anthropic Claude API, multi-agent architectures, Claude Code server automation with session handoff protocols
- **VPS Architecture:** Multi-domain production hosting—Nginx reverse proxy, LetsEncrypt SSL, Cloudflare DNS/CDN, Docker containerization, GitHub Actions CI/CD, multiple live services across two production servers
- **Iron Synapse:** Dual RTX 5090 AI compute platform for video generation, ML training, and OctaSpace distributed computing

MUNICIPAL & PUBLIC SAFETY

- Active fire station and police station deployments: Dallas, Longview, Memphis, Shreveport
- LifeNet emergency alerting—prototype built, 60+ units in pipeline (patent filed)

EDUCATION & CREDENTIALS

- **Texas A&M University** — MBA, Supply Chain Management (4.0 GPA)
- **University of Advancing Technology** — Network Security (Summa Cum Laude, 4.0 GPA); IT Forensics
- 420 hours formal programming education; 300+ hours additional professional development since 1998
- **3 Provisional Patents:** PVC Cabinet System, INTERCEDE IoT Monitoring, First Responder Alerting
- **Published:** DOTC white papers (greenlighted, funded); Biometrics R&D adopted as university curriculum 10+ years

BRAND & PLATFORM EXPERTISE

Network Security & Firewalls: Palo Alto Networks (NGFW, Panorama, GlobalProtect, Prisma Access), Fortinet (FortiGate, FortiManager, FortiClient, FortiSwitch), Cisco (ASA, FTD, Catalyst, Nexus, IOS), Cisco Meraki, MikroTik (RouterOS, CRS, SwOS, CCR)

Wireless & WAN: Ubiquiti (UniFi, Air Fiber, EdgeRouter, UISP), AvaLAN, Hughes, Starlink

Structured Cabling & Data Center: Panduit, Leviton, Belden, CommScope, APC (PDU/UPS), CyberPower, Tripp Lite, Fluke Networks (certification/testing)

Compliance & Security Frameworks: CMMC, FISMA, NIST 800-171, PCI DSS, UL 2050

Physical Security & Surveillance: Axis Communications, Honeywell (Vindicator), Knightscope, Intellius, Hikvision

Industrial Automation & Controls: Allen-Bradley/Rockwell (PLC-5, SLC-500, ControlLogix, CompactLogix, RSLogix), Wago (750 series), Staubli Robotics, Wonderware (SCADA/InTouch)

Machine Vision & Inspection: Cognex (In-Sight), Keyence, Sick

Industrial Instruments: Toledo (Mettler Toledo scales), Digi (serial-to-IP gateways)

AI & Development Platforms: Anthropic (Claude, Claude Code), OpenAI (GPT, Assistants API, Responses API), Google (Gemini), xAI (Grok), ElevenLabs, Suno

Programming & Full-Stack: Python, JavaScript/Node.js, React, Next.js, .NET/C#, PowerShell, Bash, HTML/CSS, SQL, Unity/C#

DevOps & Infrastructure: Docker, Nginx, Git/GitHub, GitHub Actions, VS Code, MobaXterm, PostgreSQL, MongoDB, Vultr, Cloudflare, LetsEncrypt, Linux (Ubuntu/Debian since early 1990s), Windows Server (NT–2025), VMware

Commercial AV/IT: Atlas IED (BlueBridge DSP), J-Tech Digital (HDMI matrix), Shure (microphones), PoE Texas, Crestron, Microsoft (Teams Rooms)

Manufacturing & CAD: Autodesk (Fusion 360 CAD/CAM), Sovol, custom-built 3D printers

Music Production: PreSonus (Studio One 7), DistroKid, BMI Publishing, ASCAP

ABOUT CHRISTOPHER

Christopher began programming at age 6 in machine language under the mentorship of his father—an electronics engineer at General Dynamics who worked on the Patriot and Sparrow missile programs. That early foundation in electronics, logic, and disciplined engineering shaped a career that now spans over three decades and eight professional domains.

Founded the first managed service provider in Texarkana, TX in 1998 (Infinet-Solutions.com)—securing three tristate ISDs and Buhrmann-Pharr Hardware (the nation's largest independent hardware distributor) as early clients. Installed the first T1 line in Texarkana. Built the first Cisco CCNA lab in the state of Arkansas for Arkansas High School Vo-Tech in 2000.

Active in rapid prototyping and custom hardware fabrication—Fusion 360 CAD/CAM design, CNC machining, and custom 3D printer construction and operation. Designs and builds enclosures, mounting systems, and custom hardware for IoT deployments including DIN rail mounted monitoring systems with opto-isolated signal capture, NFC authentication, and secure telemetry. FMEA quality engineering methodology applied across defense, software, and product development. Recently assisted a firm in evaluating and vetting RFP submissions for Microsoft and AWS data center construction projects. Also a 44-year guitarist, former touring professional, and published author who operates a registered recording studio.