

Johnathan W. Carroll

IT Infrastructure & AI Systems Leader

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Driving AI-enabled infrastructure transformations that cut costs & boost resilience

Professional Summary

Seasoned technology leader with **20+ years** designing, deploying, and securing enterprise-class infrastructure for government and private-sector organizations. Proven track record leading **\$3M+** data-center refreshes, consolidating **six OEM platforms into three core systems**, and integrating cutting-edge AI & security stacks (Docker-based Open-WebUI, Ollama, ComfyUI, DarkTrace, Microsoft Sentinel/Defender, etc.). Recently **eliminated 6 legacy racks**, trimmed annual infrastructure OPEX **by \$250K**, and boosted compute & storage performance while **shrinking physical footprint 50%** and delivering **10× security resilience** at the Pascua Yaqui Tribe. Ready to help a forward-thinking Tucson organization scale securely, cost-effectively, and AI-first.

Core Competencies

- **Infrastructure Modernization** — Nutanix AHV (Acropolis), VMware, Hyper-V, Cisco UCS, Pure Storage, NetApp, Dell EMC
- **AI & Machine Learning Engineering** — Local LLM hosting, NVIDIA GPU optimization, FP4/FP8/FP16 tuning, multi-agent workflows
- **Cloud & Hybrid Services** — Microsoft Azure IaaS/PaaS, Office 365, Azure AD, Exchange Online
- **Cybersecurity & SIEM** — Microsoft Defender (Endpoint, Server, Cloud), Microsoft Sentinel, Darktrace, Zero-Trust best practices
- **Automation & DevOps** — Docker & Compose, GitHub Actions, CI/CD, Python, Bash, PowerShell
- **Team Leadership & Project Management** — 7+ years leading cross-functional teams, \$1M+ cap-ex projects, Agile & Waterfall methodologies

Technical Skills

Virtualization & Compute:

Nutanix AHV; VMware vSphere; Hyper-V; Proxmox; KVM; Cisco UCS B-Series; Dell PowerEdge

Storage & Backup:

Pure Storage FlashArray; NetApp ONTAP; Dell EMC SC; Veeam; Cloudian S3

Networking:

Cisco Nexus & Catalyst; HP ProCurve/Aruba; Palo Alto NGFW; VLAN/VXLAN; MPLS; VPN

Security & SIEM:

Microsoft Defender (Endpoint, Server, Cloud); Microsoft Sentinel; Darktrace; Carbon Black; Cisco Secure Endpoint

AI & Data:

Ollama; Open-WebUI; ComfyUI; Hugging Face; Qdrant; pgvector; CUDA 11.4

Languages & Scripting:

Python (asyncio, FastAPI); Bash; PowerShell; YAML/JSON; SQL

Operating Systems:

Windows Server 2003-2022; Windows 10/11; Ubuntu 22.04 (WSL2); Rocky Linux

Professional Experience

IT Infrastructure Manager — Pascua Yaqui Tribe Government, Tucson AZ

Aug 2023 – Present

- Directed a **nine-person Infrastructure & SecOps team** supporting police, fire, health, HR, and finance departments across Tucson & Guadalupe.
- **Led enterprise-wide infrastructure refresh**, consolidating from six OEM platforms and four support vendors down to **three core systems** (Nutanix AHV, Cisco UCS, Pure Storage); cut data-center footprint **by 50%** while boosting compute, storage capacity, and manageability.
- Designed and deployed **Nutanix AHV cluster** replacing legacy Hyper-V nodes, reducing VM failover times 60% and simplifying lifecycle ops.
- Implemented **Microsoft Defender** suite across endpoints, servers, and Azure workloads and stood up **Microsoft Sentinel SIEM**, delivering **10× increase in threat-detection resilience** and slashing mean-time-to-detect from hours to minutes.
- Deployed **Darktrace AI NDR** and Cisco Secure Endpoint, cutting actionable security incidents by 30%.
- Built an **on-prem AI research lab** leveraging RTX 4090 GPUs, Dockerized LLM services, and local SearXNG metasearch, enabling secure internal AI pilots while maintaining data sovereignty.
- Managed capital & operating budgets; delivered FY-24 roadmap on time and 5% under budget.

Senior System Administrator — Pascua Yaqui Tribe Government, Tucson AZ

Jan 2021 – Aug 2023

- Administered multi-site AHV, Hyper-V & VMware clusters, 250+ virtual servers, and hybrid Office 365 tenant.
- Automated Windows patching and backup verification via SysSence, In-Tune, MECM, PowerShell & Veeam APIs, cutting maintenance windows 25%.
- Led migration of 100+ TB file shares to **Pure Storage & Cloudian S3** tiered solution for resilient, air-gapped backups.

Security Analyst — Pascua Yaqui Tribe Government, Tucson AZ

Jan 2019 – Jan 2021

- Hardened access-control & fire-panel networks; introduced unified event logging that cut incident-response time in half.
- Managed Avigilon CCTV, Genetec access-control, and Alertus duress systems across 30+ facilities.

IT Director / Sr. System Administrator — TBM Equities LLC | Sahara Apartments, Tucson AZ

Jul 2013 – Jul 2018

- Virtualized legacy servers to Hyper-V, slashing hardware footprint 60% and annual energy use ~\$8K.
- Implemented enterprise BDR with Veeam & off-site replication; achieved 15-minute RPO for critical systems.
- Engineered tenant Wi-Fi & wired networks serving 900+ residents; maintained >99.9% uptime.

Additional Roles

- **IT Director** – TechSoft Systems (Consulting for SMBs, network design & break/fix) *2012 – Present*
- **Technical Engineer** – BestComm Networks (Tier 3 & NOC for Best Western) *2006 – 2012*
- **Technical Manager** – TheRiver ISP (Managed 52-person team, ran ISP core services) *2004 – 2006*

Selected Projects & Contributions

- **Project Prometheus** – Created a modular multi-agent workflow framework employing Tree-of-Thought and Chain-of-Thought reasoning; integrated GitHub-hosted YAML indexes, dynamic role loading, and secure developer-mode authentication.
- **Open-WebUI Contributor** – Added SINGLE_LINE JSON valve and interface reliability enhancements; collaborate with 65+ open-source contributors.
- **AI Stack in WSL2** – Architected a Docker-based AI stack (n8n, Crawl4AI, Postgres/pgvector, Qdrant, Redis, Caddy) on Windows 11-WSL2; documented deployment for community adoption.

Education & Professional Development

- **Computer Programming & Digital Repair Certificates** – Norfolk Technical Vocational Center, VA
- **General Diploma** – Norview High School, Norfolk VA
- **Coursework, General Studies** – Tidewater Community College, VA Beach VA
- Continuous learning via Coursera, Pluralsight, and vendor bootcamps (Pure Storage, Cisco UCS, Microsoft Azure, Nutanix Academy).

Professional Affiliations

- **InfraGard Arizona** – Member
- **Open-Source Initiative** – Contributor & Advocate

Community & Leadership

- Mentor junior admins through Tucson IT Pro Guild; deliver quarterly talks on virtualization best practices.
- Active with the **Future Business Leaders of America (FBLA)** alumni network, supporting STEM outreach in local high schools.

References

Available upon request