

Carlos M. Bedia

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SUMMARY

Automation and AI engineer. Builds software that operates and audits a Tier-1 backbone, and the labs that train the people who run it.

SKILLS

Python · Ansible · AWX · Jinja2 · MCP · Microsoft Foundry / Agent Framework · CopilotKit · Azure (Bicep, azd, Container Apps, APIM, Entra) · AWS (self-study) · PowerShell 7 · Graph · Elastic · Oxidized · Nautobot Golden Config · pytest · Docker · git · Junos / EVO / IOS-XR / NX-OS / EOS · IS-IS, BGP-4, MPLS, SR, EVPN, MAP-T · ISO 42001 / CIS M365 / NIST CSF

EXPERIENCE

Founding Partner — Acadiana Tek (ACADIANA TEK LLC)

July 2026 – Present · Lafayette, Louisiana

- **Foundry Factory** — questionnaire generator for Microsoft Foundry / Agent Framework agents.
- **First-party agent lab** — Foundry stamp, private endpoints, CopilotKit chat UI.
- **M365 compliance toolkit** — CIS / NIST / ISO 27001 / ISO 42001 toolkit.
- **AI training factory** — 11 modules from one source (instructor + student artifacts).
- **Consulting vault and agent SDLC** — isolated client-work agents; multi-assistant build template.
- **acadianatek.com** — Next.js company site.

Lead Network Engineer (Tier 4) — Spectrum (Cox Communications)

September 2017 – Present · Lafayette, Louisiana metropolitan area

- **Protocol simulator / NOC academy** — air-gapped RFC control plane (IS-IS, BGP-4, MPLS, SR, EVPN).
- **Fleet SSH orchestrator** — read-only show-commands, 9,000+ Junos / IOS-XR / NX-OS / EOS devices.
- **IS-IS flap correlation** — weekly pipeline; 60-minute timeout to ~10 minutes.
- **Correlation integrity** — Monte-Carlo null (lift 1.0x) then 2.94x lift vs timeline coverage.
- **MCP agent substrate** — from-scratch MCP server (31 tools), 13 skills, 11 hooks; FOCI device-code.
- **NOC assessment platform** — Graph ingest, scoring, manager-override log (339 events).
- **GitMops** — docs-as-code Methods of Procedure with pull-request review.
- **MAP-T IPv6 automation** — self-service prefix add/remove via AWX survey.
- **SNMP vault rotation** — CyberArk-backed community-string rotation.
- **Oxidized config backup** — device configs to git via Ansible role and service identity.
- **DIAMOND** — co-developed dynamic Ansible inventory from the operational record.
- **Regional automation platform** — devcontainers, git workflow, 42 Jinja2 IOS-XR templates / six regions.
- **eSOC check tooling** — IS-IS ring, LSP/MVPN, VPLS mesh, circuit/QoS scripts.
- **Dev-environment standard** — same devcontainer scaffold across five regional repos.
- **Elastic PNH chatops** — detection-rule webhooks to Teams and Webex; telemetry into Elastic.
- **SA Automation workstream** — named Co-Leader, 2023-10 charter.
- **Backbone TSO automation repo** — founded (root commit).
- **Pre/post show-command guard** — contributed the show-only restriction on a shared role.
- **JTAC case automation** — led the playbook.
- **Disk-partition monitoring** — led the playbook.
- **On-box deploy-script checks** — led the playbook.
- **Nautobot Golden Config** — led the estate.
- **Config generators** — led the generator playbooks.

Network & Systems Engineer — Frank's International N.V.

September 2014 – September 2017 · Lafayette, Louisiana area

- **Nexus / UCS migration** — Cisco Nexus design; VMware from Dell to Cisco UCS.
- **Campus wireless** — OSPF/EIGRP point-to-multipoint between buildings.
- **Core expansion package** — IP/port plan and standard config for a new core router.
- **Edge security** — Barracuda, Meraki, antivirus.

IT Director — Vector Graphics Inc

October 2012 – September 2014 · Lafayette, Louisiana area

- **Company IT operations** — desktop, systems, network; Autodesk Vault / engineering PDM.

Operation Specialist II — Cordillera Communications

January 2011 – September 2012

- **14-station web operations** — training and support of web programs and systems.

Corporate Web Developer — Evening Post Industries

September 2008 – April 2011

- **Web platform migration** — WorldNow, Synapse, Google DoubleClick DFP.
- **DFP ad inventory** — ad inventory for 14 TV stations.

Webmaster / Content Manager — KATC Communications

January 2008 – September 2008

- **Station web and IT** — CMS, training, station support, static and Flash ad creative.

Production Manager / System Administrator — Wick Communications

June 2006 – December 2007

- **Press production and shop IT** — deadlines, digital-asset approval; PC/Mac workstations, servers, network.

Lead Design and Animator — USGS National Wetland Research Center

January 2002 – December 2004

- **Coastal restoration titles** — paid internship; team lead and Flash animator for wetland-restoration desktops.

IT Support and Artist — NATCO Group

January 2001 – December 2002

- **IT support and manuals** — computer support; re-illustrated oil and safety training manuals.

IT Phone Support / NOC — MSIS.net / Main Street Internet Service

January 1997 – December 2001

- **Connectivity NOC** — internet phone support; Windows/Linux; user-database creates and transfers.

PROJECTS

Protocol simulator / NOC academy. Sole-authored air-gapped discrete-event simulator: IS-IS, OSPFv2/v3, BGP-4 full best-path, MPLS/LDP, RSVP-TE, Segment Routing, EVPN, BFD, VRRP. Fidelity registry fails the build if a module is unregistered. 1,474 tests / 89 conformance files. Lab prose executed in CI. Design standards as machine-checkable rules on 1,700+ sanitized configs.

Fleet SSH orchestrator. Read-only show-commands on 9,000+ devices. Inventory lookup before any socket. Guard splits on ; and runs before the credential read. Two-hop access after jump host dropped password auth (RFC 4256 / pty expect).

IS-IS correlation and integrity. Bulk windowed range scans (60 min → ~10 min). Monte-Carlo null reproduced 100% coincidence (lift 1.0x); rebuilt to 2.94x lift vs timeline coverage.

MCP agent substrate. From-scratch MCP server, undocumented lab API, 31 tools. 13 reviewed skills. 11 hooks refresh credentials before 401. No-app-registration tenant solved with first-party MSAL device-code (FOCI).

Foundry Factory and lab. Questionnaire emits spec, agent.yaml, Python/.NET, azd Bicep, cost estimate, security checklist, SOW. Lab: Foundry agent, private endpoints, CopilotKit UI.

GitMops and regional automation. Word-processor MOPs replaced with docs-as-code PRs. Earlier: 42 Jinja2 IOS-XR templates / six regions; DIAMOND dynamic inventory (co-developed).

Elastic PNH chatops. Elastic rules → webhooks to Microsoft Teams and Cisco Webex (interface errors, optics). Streaming telemetry of error rates into Elastic.

Training factory and M365 toolkit. 11 modules, one source (Copilot, Claude, NIST AI RMF / ISO 42001). Toolkit maps CIS/NIST/ISO 27001/42001.

EDUCATION

Bachelor's, Visual Arts – Computer 3D Animation · University of Louisiana at Lafayette · 2006

CERTIFICATIONS

Cisco CCNP Enterprise (Enterprise Core + Advanced Infrastructure specialists) · through 2028-07-30

Cisco AI Technical Practitioner · 2026

CCNA Cybersecurity · through 2028-07-30

JNCIA-Junos