
Christopher George Stradtman

Advanced Services Architect & Network Infrastructure Specialist

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Professional Summary

Seasoned Network Architect and Infrastructure Specialist with over 15 years of experience delivering scalable, high-availability network solutions across live events, cloud infrastructures, and enterprise environments. Proven in converging cutting-edge technologies with robust monitoring, innovative automation, and data-driven performance optimization. Passionate about transforming complex challenges into clear, actionable strategies—whether through designing industry-leading event networks or modernizing cloud ecosystems for high-profile clients.

Core Competencies

- **Network & Infrastructure Design:**
End-to-end design of mission-critical networks, hybrid cloud integration, and modernization of legacy systems using technologies like Kubernetes, and TimescaleDB.
- **Automation & Scripting:**
Proficiency in Python and Lua for developing advanced tools in automated incident response, performance testing, and operational acceleration.
- **Data-Driven Optimization:**
Expertise in leveraging telemetry tools (Kentik, RIPE routing data, Grafana, and Airflow) to refine traffic engineering, optimize CDN routing, and enhance overall network performance.
- **Event & Temporary Deployment:**
Mastery in the rapid deployment and extraction of robust network infrastructures across diverse, challenging venues under strict time constraints.
- **Technical & Thought Leadership:**
Extensive experience in cross-functional collaboration, technical blogging, and active participation in key industry groups.

Professional Experience

Advanced Services Architect | Edgio (Limelight)

Jan 2021 – Jan 2025

- **Multi-Customer ASA & Performance Innovation:**
Transitioned from flagship assignments with major clients (Disney, Fox Networks) to a dedicated role supporting Amazon Prime. Self-directed research led to enhanced caching efficiency, reduced latency, and an exceptional user experience.
- **Integrated Complex Systems:**
Implemented embedded Lua in CDN software and deployed Python-based edge functions for media vault (time-based content protection) and Yospace (ad insertion) integrations. Collaborated extensively with internal engineering teams and key stakeholders.
- **Automated Incident Response:**
Developed a script automating ServiceNow ticket creation and updates, thereby improving internal operations and client communications during dynamic traffic engineering events.
- **Optimized Network & Data Infrastructure:**
Authored a whitepaper addressing misconfigurations in IRR/RADB and championed the adoption of RPKI along with a public geofeed. Maintained and improved an advanced data infrastructure (with Grafana, Airflow, PostgreSQL, and TimescaleDB) to deliver extended operational data retention for high-value clients (including Amazon, HBO, and CrunchyRoll).
- **Testing & Tooling Innovation:**
Built a suite of tools—a live source container for origin testing, hierarchical storage map generators, and a Jupyter container running Lua with a CDN simulator. These tools, supported by comprehensive Lua/Python test suites, accelerated development cycles and enhanced cross-team knowledge sharing.
- **Data-Driven Traffic Engineering:**
Engineered Python-based solutions that integrated data from Kentik, RIPE, geolocation sources, internal logs, and historical traffic. One solution automated traffic profile generation for live Amazon events by estimating available downstream bandwidth from small ISPs across various paths. Another optimized Amazon origin routing to minimize hops and reduce caching server load.

- **Technical Thought Leadership:**
Authored articles on the Limelight blog and established GitHub repositories for a Kubernetes ingress controller leveraging Edgio's CDN—addressing SDK bug fixes and bolstering the developer ecosystem.
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Owner & Technical Lead | Christopher Stradtman, LLC

(Formerly Chris Stradtman, LLC)

Jan 2013 – Jan 2025

- **Event Network Project Leadership:**
Operated an event networks business as the subcontracted technical lead—delivering customized temporary network solutions for events ranging from single-day gatherings to multi-week showcases. Served as the on-site technical lead for installations, testing, and prompt extractions.
 - **Rapid Deployment & Extraction:**
Managed projects under strict deadlines, completing network installations, configurations, and testing within 1–5 days, with extractions executed in 1–2 days.
 - **Advanced Network Engineering:**
Engineered high-availability infrastructures by configuring mission-critical firewalls, routers, and switches; employed static/BGP routing with NAT; delivered essential services (DHCP, DNS); and rapidly resolved multi-layer network issues whether deploying dedicated solutions or interfacing with venue-supplied infrastructure.
 - **Versatile Venue Deployments:**
Led network deployments in diverse environments—from historic sites and unconventional venues (river barges, vintage train stations) to modern facilities like the Mercedes-Benz Arena (Shanghai) and the LA Convention Center. Frequently managed multi-venue deployments for high-profile events such as Dota 2 International.
 - **Cross-Functional Collaboration & Debugging:**
Acted as liaison for show producers, venue operators, and client technical teams, providing critical packet-level debugging support during live events—especially for broadcast TV streaming and technical demo troubleshooting.
 - **Comprehensive Monitoring & Alerting:**
Designed and implemented integrated monitoring frameworks deploying SNMP, logging systems, uptime/latency tools, external connectivity checks, and messenger-based alerting (Slack, Telegram) to ensure continuous network oversight.
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Senior Network Architect | GeoFrenzy

Aug 2016 – Feb 2019

- **Innovative Geospatial Solutions:**
Pioneered the integration of geospatial mapping with IPv6 addressing, positioning GeoFrenzy as an innovator in geofencing and location-based services.
 - **Fence Delivery Network Architecture:**
Led the design and deployment of the “Fence Delivery Network” on Google Cloud Platform (GCP), using PowerDNS to support a Java-based logic core and deploying containerized infrastructure on Google Kubernetes Engine (GKE) for enhanced scalability and reliability.
 - **CI/CD & Monitoring:**
Developed DevOps pipelines using Jenkins and Bitbucket, and implemented an ELK stack for real-time monitoring of network performance and telemetry data.
 - **Embedded Systems & Drone Integration:**
Engineered integration solutions in C/C++ with ZeroMQ linking encoding logic with drone firmware. Designed Raspberry Pi-based sensors (utilizing MQTT and ActiveMQ) to modify 802.11 beacons and construct a centralized registry for drone operations to create a single pane of glass for both drone operations and aircraft broadcast ADSB..
 - **Industry Engagement:**
Actively participated in an IEEE working group on aerial network communications, contributing critical technical insights to align innovations with emerging industry standards.
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Volunteer Experience

- **InteropNET Team Lead, Interop**
Mar 1996 – Mar 2022
Led and expanded the InteropNET team, designing, building, and operating one of the largest temporary networks on earth. Contributed to evolving InteropNET into a hybrid cloud operation that delivers annual greenfield enterprise networks for major venues (e.g., Las Vegas Convention Center, Mandalay Bay, Javits Center, Georgia World Congress Center).
- **NOC Team Member – IETF Meetings, Internet Engineering Task Force**
Jan 2000 – Jan 2006
Collaborated in designing, deploying, and operating rapid-deployment networks for IETF meetings—with extensive wireless setups, multiple IPv4/IPv6 BGP peerings, and

connectivity for over 1,500 power users—ensuring reliable network performance for the architects of Internet standards.

- **Member, P1920.1 Working Group, IEEE**

May 2017 – Feb 2019

Participated in the Aerial Network Communications working group, contributing to standards and discussions that drive innovations in drone and IoT integrations.

Professional Affiliations & Industry Involvement

- **InteropNET Team Lead (1996 – Mar 2020):**

Directed large-scale temporary network initiatives for major events, driving innovations in hybrid cloud and colocation systems.

- **IETF NOC Team Member (2000 – 2006):**

Engineered rapid-deployment networks that reliably supported over 1,500 technical experts during IETF meetings.

- **IEEE Working Group Member (P1920.1) (May 2017 – Feb 2019):**

Actively contributed to aerial network communications standards enhancing drone and IoT technologies.

Education

- **Master of Applied Mathematical Science in Computer Science**

University of Georgia, 1989

- **Bachelor of Science in Computer Science**

Southern Polytechnic State University, 1987

Certifications & Professional Development

- **Supervised Machine Learning: Regression and Classification**

DeepLearning.AI, Issued May 2025

- **Build and Secure Networks in Google Cloud**

Qwiklabs, Issued Jun 2020

- **Cloud Architecture**
Qwiklabs, Issued Jun 2020
 - **Networking in the Google Cloud**
Qwiklabs, Issued Jan 2019
 - Additional technical certifications in MikroTik, Xirrus, and Infoblox are available upon request.
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Technical Skills

Networking & Systems

- **Advanced Network Configuration:**
Troubleshooting, Routing (BGP, OSPF), TCP/IP, Firewalls, Switches, Wireless Networking, VPNs, High Availability

Cloud & Automation

- **Platforms & Tools:**
Google Cloud Platform (GCP), Kubernetes, Jenkins, CI/CD, Serverless Computing, Cloud Architecture, Network Automation

Programming & Scripting

- **Languages:**
Python, C, C++, Lua
- **Development Environments:**
Proficient in Linux ecosystems and Git version control

Monitoring & Analytics

- **Tools & Frameworks:**
Grafana, Jupyter, Airflow, Pandas, PostgreSQL, TimescaleDB, SNMP, Real-Time Telemetry

Specialized Technologies

- **Expertise:**
PowerDNS, Content Distribution Networks, IoT, Drone Integration
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Soft Skills

- **Leadership & Mentoring:**
Demonstrated ability to lead teams and mentor junior engineers in high-pressure, technical environments.
 - **Effective Communication:**
Proven excellence in conveying complex technical information to both technical and non-technical stakeholders, ensuring clear collaboration and project success.
 - **Adaptability & Problem-Solving:**
Recognized for agile thinking when addressing dynamic challenges, creatively resolving issues in fast-paced live event setups and evolving cloud infrastructures.
 - **Cross-Functional Collaboration:**
Strong track record working seamlessly with multidisciplinary teams, clients, and industry partners to deliver integrated, innovative solutions.
 - **Strategic Vision & Innovation:**
Ability to think critically about emerging technologies and translate strategic vision into actionable, high-impact technical projects.
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Technical Contributions & Publications

- **Limelight Blog & GitHub Contributions:**
Authored a well-recognized article on the Edgio (Limelight) blog detailing integration and performance enhancements, and developed GitHub repositories for a Kubernetes ingress controller leveraging Edgio's CDN—including critical bug fixes in the LimeLight Python SDK.
 - **Personal Blogs & Thought Leadership:**
 - **ChrisStradtman.com Blog:** Chronicles a technological journey from the 1970s to today, covering innovative network designs and reflections on the evolution of technology.
 - **Kube-Demo Blog:** Documents the process of building a Kubernetes cluster using surplus hardware, aimed at empowering hobbyists, educators, and small groups.
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Selected Projects

- **Amazon Prime Traffic Optimization:**
Developed a Python-based solution integrating data feeds from Kentik, RIPE, and internal telemetry to automate traffic engineering and optimize CDN routing.
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Developed a Python-based solution integrating data feeds from Kentik, RIPE, and internal telemetry to automate traffic engineering and optimize CDN routing.
 - **Advanced Data Infrastructure:**
Led the management of a PostgreSQL server with a TimescaleDB backend powering real-time operational dashboards via Grafana, significantly enhancing data retention and reporting capabilities for high-profile customers.
 - **Kubernetes Ingress Controller:**
Engineered an innovative ingress controller using Edgio's CDN integrated into Kubernetes, contributing to open-source projects and refining platform SDK functionality.
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References

Available upon request.
