

BERND KUHLEN

CLOUD ENGINEER

Architecture · Automation · Operational reliability

Bonn area, Germany

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PROFILE

Cloud engineer with more than 25 years in IT, from C++ development and Linux systems administration to AWS architecture and applied AI. Combines technical leadership with 22 years of on-call experience. Focuses on resilient infrastructure, repeatable delivery and actionable observability.

CORE EXPERTISE

Cloud & delivery: AWS, CloudFormation, Python, IAM, EC2, S3, Lambda, CloudFront, EventBridge; Infrastructure as Code, Git and CI/CD.

Operations & platforms: Linux, VMware, storage and performance analysis; Akamai CDN, DNS, TLS and load balancing.

Observability & teams: CloudWatch, Nagios, Zabbix, Checkmk, Grafana, Prometheus; incident response, escalation management and Scrum.

PROFESSIONAL EXPERIENCE

Cloud Engineer | Covestro

2022 - present

AWS cloud engineering, with additional roles as Scrum Master and IT Escalation Manager. Member of the Covestro AI Academy, developing experience in AI-powered automation and documentation agents.

Cloud Solutions Engineering | WetterOnline

2018 - 2022

AWS architectures, automation and containers. Cloud operations, event-driven Lambda functions for monitoring and compliance checks, and Infrastructure as Code for web applications.

Systems Administration Lead | WetterOnline

2004 - 2018

Led the administration team and shared responsibility for 24/7 operations. Delivered monitoring, edge caching and virtualization projects; supported infrastructure growth under highly variable demand.

C++ Developer | WetterOnline

2000 - 2004

Developed CGI-based web applications and weather software, including customer-facing applications.

SELECTED PROJECTS & OUTCOMES

Akamai CDN | 2008

Introduced edge caching for a bare-metal web platform with traffic peaks of around 20 times normal demand. Roughly 90% of requests were served away from the origin, allowing the web-server farm to shrink.

Bare metal to VMware

Repurposed a storage system that had not met production cache-latency requirements as the foundation for server virtualization. Consolidation saved more than EUR 10,000 in monthly rack costs.

Proactive monitoring & on-call

Evolved logfile scripts into service checks, TLS-expiry monitoring, performance trends and alerting for the 24/7 responder team. Nagios and Zabbix first; Grafana and Checkmk followed.

Personal engineering projects

Built Kraftwerk to record and analyse strength-training progression. Rebuilt the portfolio as a multilingual AWS-hosted site with automated quality gates, privacy-conscious analytics and cost safeguards.

CERTIFICATIONS & CONTINUING LEARNING

AWS Advanced Networking - Specialty

Valid through April 2027, as recorded in the portfolio.

Professional Scrum Master I

Scrum.org, November 2023. Permanent credential.

Previously earned AWS certifications

Solutions Architect - Professional and DevOps Engineer - Professional (2022); Solutions Architect - Associate (2018); SysOps Administrator - Associate (2019). These certifications have expired.

Recent coursework | 2025 - 2026

20 course credentials covering generative AI, Claude Code, Codex, RAG, MCP, agent orchestration, Amazon Bedrock and Python/Streamlit. Coursework is distinct from professional certification.

EDUCATION

Diplom (FH), Computer Science | 2003 - 2007

Trier University of Applied Sciences. Studied alongside full-time work. Final grade: 1.1 (German scale).

Diplom, Meteorology | 1994 - 2000

University of Bonn. Final grade: 1.0 (German scale).

Languages: German and English.

Project details and credential records: berndkuhlen.de