

Guido Maria Serra

STAFF / PRINCIPAL SITE RELIABILITY ENGINEER · INFRASTRUCTURE, SECURITY & CLOUD NATIVE

📞 +49 173 7349 795 | ✉️ guido@whitehat.berlin | 📍 Berlin, Germany | 🌐 github.com/zeph | 🔗 linkedin.com/in/zeph1ro

Summary

Staff / Principal Site Reliability Engineer specializing in **Kubernetes, identity management, and airgapped ML infrastructure**. Three decades of GNU/Linux production experience, from early enterprise deployments to modern cloud-native distributed systems. Early adopter of cloud native (2016) and airgapped local LLM inference on self-built dual Titan RTX hardware (2020). Designs systems that stay up, stay secure, and that teams can actually operate. Contributor to Traefik; Debian maintainer (wcid, ported to Python3).

Selected Impact

- Operated PlayStation Now infrastructure: **55,000 hosts across 12 datacenters**.
- Co-managed **\$30M+ infrastructure spend** (AWS \$24M / Akamai \$4M / NewRelic \$2M).
- Built a **1.5PB hybrid storage platform** (Max Planck Institute).
- Reduced infrastructure cost by **\$300K/year** through FinOps (OLX).
- **16 consecutive contract renewals** over a 4-year engagement (Mobivia).

Core Competencies

Cloud Native	Kubernetes, ArgoCD, Traefik, SealedSecrets, Cilium, Terraform, OpenStack
Security & Identity	Keycloak, OIDC, LDAP/Kerberos, Active Directory, Vault, WAF (Cloudflare/Fastly Signal Sciences), SIEM (ELK)
Observability	ELK, Prometheus, Grafana, OpenTelemetry, Cilium/Hubble, Datadog, NewRelic
CI/CD	GitLab, Jenkins, TeamCity
Programming	Python, Go, TypeScript/Node.js
Specialized	BTC transaction-graph risk analysis, stablecoin implementation, airgapped LLM inference

Professional Experience

CONTRACTOR – SECURITY & INFRASTRUCTURE ENGINEERING (2018 – PRESENT)

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Berlin, Germany / Predore, Italy

CONTRACTOR

- **Max Planck Institute** – Designed a hybrid OpenStack/Kubernetes platform with 1.5PB MinIO storage; federated IAM (LDAP/SAML/OAuth2); infrastructure as code with CDKTF.
- **Octostar** – Built multi-architecture GPU Kubernetes clusters for ML training/inference; ClickHouse/MinIO data platform; delivered a fully air-gapped solution running local LLM models.
- **ClovrLabs** (Barcelona) – Cloud Architect for a blockchain reputation unicorn
 - Assessed source-of-funds risk across the entire public BTC transaction graph on a 5-node Redis cluster.
 - Designed a clean, maintainable AWS EKS setup; Cilium for network policy and security.
 - Built 5-person security ops team from the ground up; federated IAM with SAML/Google/Cloudflare Access.
- **Prima Assicurazioni** (London/Milan) – Staff SRE: coached 12-engineer SRE team on blameless culture and incident response; drove infra scaling, cost optimization, and governance; coordinated AWS multi-region rearchitecture (London, Barcelona, Milan); guided the org through restructuring toward Domain-Driven Design.
- **Mobivia / ATU** – DevOps; 4-year engagement (rolling 3-month contracts, 16 consecutive renewals)
 - Unwound an organically grown on-premise Kubernetes setup; CDN/DNS/network SME.
 - IAM: Keycloak (OIDC) + Active Directory (LDAP/Kerberos); SPNEGO tuning on Nginx Ingress.
 - Stabilized ELK with retention policies; DNS restructuring; DDoS protection (Cloudflare + DataDome); DMZ hardening; Traefik migration; Kong ServiceMesh; Cloudflare CDN optimization.
- **HelloFresh** – SecOps: started as a 2-week emergency response, extended into a multi-year engagement. Stabilized SIEM (ELK + S3 ingestion); rolled out library vulnerability scanning with Jira integration; controlled ELK costs and sizing; hired and onboarded a full FTE team.
- **FinTech Stealth** (UAE) – Senior Software Development Engineer: developed tokenized financial infrastructure in Python and Node.js/TypeScript; FastAPI microservices; AI-native engineering workflows (Cursor, Windsurf).

SENIOR INFRASTRUCTURE ENGINEER – FULL-TIME EMPLOYEE (Q3 2010 – AUGUST 2018)

OLX Group

SENIOR PERFORMANCE ENGINEER

Q3 2016 – Q2 2018

- Web performance domain expert; load & performance testing across 4 locations (AR, PT, DE, IN); CDN/SSL/DNS vendor selection and coaching.
- Managed **NewRelic (\$2M)**, **Akamai (\$4M)**, and **AWS (\$24M)** contracts; saved **\$300K/year** through FinOps practices.
- Contributions to the Goad AWS Lambda load-testing tool (Go).

Sony PlayStation (Gaikai → PlayStation Now)

SITE RELIABILITY ENGINEER

Q3 2013 – Q2 2016

- Operated **55k hosts across 12 datacenters** for global game streaming; on-call across the Atlantic; mentored 5+ engineers.
- Designed NTP infrastructure for low-latency gaming; PKI-based SSH platform; architected Ceph storage (RBD, CephFS, S3/RGW).
- Built a DSL via textX for graphite-api, enabling Grafana adoption; PXE-booted Tokyo and London DCs; resolved DHCP/VPN MTU issues.

Rocket Internet

SR. SOFTWARE ENGINEER / CHIEF TROUBLESHOOTER

Q4 2012 – Q4 2013

- Direct report to the Global CTO; resolved production issues across 300+ ventures globally; built a Hadoop/MapR cluster for big-data analytics.
- Author of SqlHBase (pypi.org/project/SqlHBase); patched a major PHP data structure (adjacency tree in pure SQL with stored procedures).
- Solved TCP window scaling on high-latency networks (stunnel + rsyncd).

txtr / 3M

HEAD OF SITE RELIABILITY & RELEASE MANAGEMENT

Q3 2011 – Q3 2012

- Owned site reliability for Europe's largest content aggregator; metadata ingestion (ONIX, Adobe DRM).
- Introduced JMX-based instrumented metrics; designed a Ruby/BDD automated testing solution; Graylog for centralized log management.

ProfitBricks / IONOS

SENIOR SYSTEM ADMINISTRATOR / DEPUTY TEAM LEAD

Q2 2011

- Deputy team lead for a KVM-based cloud computing service; Nagios, Puppet, Debian LiveCD, GlusterFS, Python, Bacula.

Gate5 / Nokia / HERE Technologies

SENIOR SYSTEM ADMINISTRATOR

Q3 2010 – Q2 2011

- Operations and R&D for OVI Maps; CI environments (Puppet, CentOS); Cucumber-Nagios QA/monitoring; Yahoo/OVI Maps integration.

CONTRACT – DÜSSELDORF, GERMANY (Q1 2008 – Q2 2010)

Vodafone Group

QA ARCHITECT

- **10 consecutive contract renewals** over 2.5 years (rolling 3-month contracts) during the Italy → Germany transition.
- Led load & performance testing; identified major architectural flaws in Java enterprise applications; authored an internal load-testing toolkit (HTTP-QAT) and stress-tested Vodafone 360 backends.

EARLIER CAREER – SOLUTION ARCHITECT / SYSOPS / PROGRAMMER, ITALY (1996 – 2008)

- Embedded Linux R&D with Alessandro Rubini (*Linux Device Drivers*) and Marco Cavallini (KOAN).
- Enterprise security (NSEC: Cisco PIX, CyberARK, Nessus); security analysis (H3G Italy); financial QA (BPU Banca: ClearCASE, Oracle, PL/SQL).
- Lecturer in C socket programming, Politecnico di Milano; **ICTF World Champion, 2005**.
- Open source: wicd (Debian Maintainer, ported to Python3).
- **Software projects:** Pandora — complete SMB stack on heartbeat/DRBD (OpenLDAP/PAM/Samba, Postfix/Cyrus, Asterisk/Hylafax, OpenVPN on OpenWRT); Tempus — SMS appointment notification engine with GSM modem and OpenOffice XML templating; Stendhal — full-text indexing and retrieval for Biblioteca Sormani digital library (MySQL, DjVu, OWASP — still online at digitami.it/stendhal).
- **Published software:** SqlHBase (pypi.org/project/SqlHBase) — MySQL dump parser for HBase/Hive JDBC; HTTP-QAT (SourceForge) — load-testing framework used org-wide at Vodafone; contributions to Goad (Go, AWS Lambda), GOsa² (LDAP schema extensions), Seagull (SQLite support), GNU/TLA (FTP auth fix), textX DSL for graphite-api (Sony PlayStation), Cucumber-Nagios (Ruby, repackaged for CentOS).
- Volunteering: IT Manager, Ingegneria Senza Frontiere; Emergency/PeaceReporter; Linux Day; DEFCON, FOSDEM, DebConf.

Certifications

Red Hat Ceph Storage (CEPH125), 2016 | ISO 27001 / Vanta Auditor, 2025 | PMP Training (CEFRIEL, Milan), 2007

Security & Community

Security: DEFCON CTF finalist; SOC GOON at DEFCON 2025.

Open Source: FSFE Fellow; Founder, Politecnico Open *nix Labs (POuL); Debian Maintainer (wicd); Traefik Contributor; Goad contributor.

Work Authorization: EU Citizen; eligible for US & UAE work visa sponsorship.

Languages: Italian (Native), English (Fluent), German (Working)

Interests: Offshore Sailing (Centro Velico Caprera, Les Glénans), Skiing, Cooking, Trekking, Alpine Guide (CAI Bergamo)

📞 +39 348 4313 992 | ✉️ zeph@guidoserra.it · zeph@fsfe.org | 📍 Predore, Italy

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 e del GDPR (Regolamento UE 2016/679).