Oleksii Khilkevych

Software Engineer | Platform Engineer | Site Reliability Engineer

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Looking to fill SRE/SWE/Lead/x-functional position in great team with potential for growth

Summary

Platform Engineer with 9+ years designing and maintaining high-availability infrastructure across cloud and on-premises environments. Specialized in Kubernetes, IaC automation, and observability. Proven track record managing 50+ production environments with focus on SLA/SLO compliance and incident response. Experienced in driving platform reliability initiatives and leading automation efforts across hybrid cloud environments.

Experience

Platform Engineer (SysOps) · DE-CIX · 09/2024 - Present

- rewrote account sync tool from AD to OpenLDAP in modern Python
- developed DNS zone analysis tool for complicated BIND configs in Python
- implemented Terraform PoC as part of wider Proxmox PoC
- managed DNS, Azure, contributed to IaC, monitoring and automation
- incident response and troubleshooting of multi-site global IX setup, 24x7 on-call

SWE / SRE / Founder · Noroutine · 09/2018 - Present

- implemented custom Lane IdP (https://lane.id/) by OpenID Spec with some extra extensions, WebAuthN support and off-device login flow (TypeScript/Fastify)
- implemented cloud service interconnect (https://nail.lane.id/) with TCP-over-HTTP (custom WebSocket-like protocol, core idea is similar to frp reverse proxy but with a lot of extra sauce)
- implemented cloud MTA (https://shovel.mx/) for special mail processing and archiving
- implemented weird cross-platform service discovery mechanism for clients with limited DNS capabilities
- many interesting projects (LIR, anycast DNS, IoT, CDN, grey noise detection, eBPF, if to recall few spotlights)
- built complete infrastructure from 0 to 1 (baremetal servers with proxmox + vms and few k8s clusters on top), everything automated with stacks of multiple tools
- many more non-tech achievements

Platform Engineer (Big Data) · Allianz · 10/2019 - 12/2023

- migrated 50+ Big Data environments from private cloud to Azure/AKS Cloud Infrastructure
- wrote NFS and LDAP metrics exporters in Go for Prometheus as per custom requirement
- maintained custom-branded BinderHub fork with internal extras and patches (Python)
- designed and implemented multi-tenant highly-available containerized monitoring solution for 50+ Allianz OE Big Data Analytics environments with alerting and long-term storage running on Nomad and later Azure
- was go-to person for several key areas, like ElasticSearch, JupyterHub, BinderHub, Development PoCs
- SLA/SLO management
- proactively prepared the team for COVID lockdown

Principal DevOps Engineer · ACI Worldwide / PAY.ON · 09/2015 - 10/2019

- built DevOps team from 0 to 1, people, tooling and culture
- implemented DR tooling in Go for platform monitoring, automatic traffic failovers and DR exercises, saved $200k first week it was deployed, also wrote UltraDNS/Pingdom management CLI in Go
- modernized ancient tech stack to Git, Gradle, Jenkins
- was driving weekly code retreats and PoCs on k8s, containerization, virtualization, automation, hackathons, Git, Ansible, Docker Swarm, and more

Senior Software Engineer · Contract/Consulting · 2002 - 2015

- fullstack development in various companies and projects

Programming Languages

Python · JavaScript · TypeScript · Java, Kotlin, Groovy · Rust · Go · bash

Education

Igor Sikorsky Kyiv Polytechnic Institute · Kyiv Ukraine

MS in Systems Analysis, Computer Science · 2003 - 2009

Highlights

- Highly successful datacenter high-availability setup for global payment company
- Infrastructure migrations for leading payments services provider in Germany
- Extensive development experience as Java, JavaScript and Golang developer
- Wrote projects in Java and Go, plugins and dynamic inventories for Ansible in Python, plugins for Jenkins in Java, plugins for Vagrant in Ruby, tools in Perl+GTK
- Performed CI/CD infrastructure setup and maintenance from code for various setups, including Jenkins, Gerrit, Artifactory, Nexus and GitLab
- Hands-on experience with containers on Nomad, Kubernetes in Docker, rkt and cri-o runtimes
- Hands-on experience with automation tools (Puppet, Ansible, Terraform, Vagrant, Packer)
- I have worked with most cloud infrastructures (OpenShift 2/3, AWS, GCP, Bluemix, Heroku, CloudFoundry) and on-premises (VMWare, OpenStack)
- Hands-on experience with development processes and tools like code reviews, git flow, as well as most development build tools
- Database Administration (PostgreSQL in HA configurations with streaming replication, pgLogical or BDR)
- Performed virtualization infrastructure setup and maintenance from code(VMWare/Ansible/Terraform) and using my own templates baked with packer
- Hands-on experience with all infrastructure backyard like load balancers, proxy servers, DNS servers, SMTP, custom packaging
- Expert in Digital Certificates, maintained multi-level PKI and worked with custom OIDs among other things)
- Experience with automating HSMs
- Constantly trying new things and running my own lab infrastructure for experiments
- Trained several teams on various topics, like Git, Gerrit, GitOps, DevOps
- Lead of several teams
- Experience working in PCI-DSS regulated environment
- Experience with GDPR implementation in several companies

Skills

- Languages: Rust, Golang, Java, Groovy, Kotlin, Python, TypeScript, JavaScript, SQL, Bash
- Web Frontend: JavaScript, TypeScript, Vue, React, CSS/SASS, vanilla.js
- Queues: Kafka, RabbitMQ, NATS, Mosquitto
- LLM: vLLM, RAG, embeddings, Mulvis, chromadb, MCP
- Backend: Go, node.js, Java Spring, Hibernate
- Databases: lmdb, PostgreSQL, Mongo, Redis, ElasticSearch, Consul, ClickHouse
- Platforms: AWS, GCP, Azure, VMWare, Proxmox, OpenNebula, KVM/openvirt, bare-metal
- Automation/CI&CD: Ansible, pyinfra, Puppet, Terraform, Jenkins, GitLab CI, GitHub Actions
- Code Repo/Code Review: bare Git, GitHub, GitLab, Gerrit
- Artifact Repositories: Nexus, Artifactory, Harbor,
- Containers: Nomad, K8s, Helm, ArgoCD, GitOps, Docker, Docker Swarm, rkt, CRI-O, LXC
- Monitoring/Observability: Pingdom, Prometheus, InfluxDB, ELK, Grafana, Jaeger, OpenTelemetry
- Service Discovery: etcd, Consul
- DevSecOps: HashiCorp Vault, Ansible Vault, istio, GnuPG
- Big Data Analytics: Spark, Luigi, Jupyter, ELK, Airflow, CUDA
- CDN/Traffic Management: CloudFlare, Akamai, F5 GTM, anycast DNS
- Backbone Networking: LAN/WAN routing, NAT, L2-L7 balancing, firewalls
- Core Networking: VLAN, VxLAN, GRE, BGP, OSPF, VRRP
- Network Protocols: TCP/IP, HTTP, DNS, LDAP, NTP, RADIUS, SMTP, SPF, DMARC, DKIM
- VPN: client-to-site and site-to-site IPSec, L2TP, OpenVPN, Wireguard, SD-WAN
- Centralized IDM: PAM, Kerberos V, OAuth/OpenId, LDAP, RADIUS/TACACS, mTLS, FreeIPA, Active Directory
- PKI: Root and Intermediate CA management, TLS1.2/1.3, OCSP, custom OID fields
- SAN: iSCSI (targetcli, 3par, Isilon), RDMA/RoCE, NAS: NFSv3/v4, Samba, DAS: SAS/SCSI, all-flash arrays, RAID0/1/5/6/10
- Storage Clusters: vSAN, ScaleIO, DRBD, GlusterFS, Ceph, Minio
- Troubleshooting: System/Storage/Network performance, tcpdump

Human Languages

- English (proficient with an accent), German (B2), Ukrainian (native)

My Selected Projects with various degrees of activity

- **kekse** - specialized KV store for PASETO/Biscuit/JWT tokens, slowly going as a challenge to learn Rust
- **AI bot** - my personal AI assistant that inflates my energy bill
- **Lane** - IdP with extra functionality like service discovery, webauthn, custom off-screen support
- **Nail** - secure global service/app interconnect that uses Lane IdP
- **Shovel MX** - MTA with LLM support
- **Scribe** - MJML template microservice
- **Disco** - cross-platform method for DNS-based service endpoint discovery that works when SRV records don't
- **nrtn.me** - URL-shortener using Cloudflare Workers
- **tripwire** - port-scan/DDoS internet radar
- **dnsconfig** - custom dns server to use DNS as distributed KV store
- **rustlings-ua** - translation of Rustlings
- **terraform-eui64** - EUI64 calculator as per RFC4291
- **grit** - Grafana Dashboard Generator

My Home Lab/DataCenter Stack

I am homelabber since many years and use it to keep myself fresh and try out whatever i want. Not everything is powered on of course all the time, but thats where i keep my hands dirty
LIR Maintainer (de.noroutine), my homelab has 100Gbit networking

- 18 supermicro servers, 2 JBODs, 1 GPU node for LLMs
- HV: VMWare VSAN, Proxmox with Ceph/NFS
- Containers: 5 vanilla k8s clusters with istio and some sporadic docker nodes
- Networking: 100/25/10Gbit of FortiGate, Arista, Mikrotik gear
- bird for BGP, wireguard/IPSec for VPNs
- PowerDNS, Posfix and Exchange for basics, OpenLDAP and Keycloak for accounts
- cert-manager and certbot for public certificates, maintain own multi-level internal CA
- Nexus OSS for repository and GitLab for Git and CI/CD/IaC
- Terraform, Ansible, pyinfra, ArgoCD for IaC
- all k8s clusters are peered with core routers via BGP
- most recently migrated everything to IPv4/IPv6 dualstack setup, including K8s too!

Most coding and CI/CD activity is in private GitLab, but i do sync some to GitHub

- **infra-setup** - how i build my infra
- **upstream** - my abuse of dependabot for keeping it up to date

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