Igor Svilenkov Bozic

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PROFESSIONAL SUMMARY

Experienced Infrastructure, Network, and Software Engineer with a demonstrated history of managing complex projects across various technologies and platforms. Proven track record in server provisioning, network design, cloud infrastructure, and software development. Strategic thinker with strong leadership skills, adept at driving efficiency and innovation in fast-paced environments. 15 Years of professional experience

WORK EXPERIENCE

Filmineio / Web3Mine / RamoIO   2021-2024
Infrastructure / Network / Software Engineer   *Serbia (remote)*

>_ Bare Metal provisioned & maintained 50+ servers:
- o   In **2** DataCenter(s), **2** Server Rooms, dedicated hosting providers on **Hetzner** & **Equinix**.
- o   **Provisioning** Ansible, SaltStack,
- o   **Observability** self-hosted solutions:
    - ▪   Grafana Loki, Promtail, Kapacitor, InfluxDB, Clickhouse, vector.dev, VictoriaMetrics, Telegraf with golang plugins
    - ▪   Custom Telegraf plugins in Go & Rust
- o   **Orchestration** HashiCorp Nomad, SystemD, PQueue
- o   **Storage** ZFS Pools, GlusterFS, LVM, BTRFS, NFS, NVMeOF
- o   **Sysadmin**
    - ▪   Install & Maintenance of Debian 12, Ubuntu, FreeBSD, VyOS, pfSense
    - ▪   GRUB
- o   **Reverse Proxy** / **LoadBalancer**/ **HighAvailability** HTTP(s) endpoints:
    - ▪   HAProxy
    - ▪   Automated SSL certification with **Cloudflare** API and **Certbot**
- o   **Xcp-ng** (Xen) Hypervisor self-hosting, configuration & management

>_ DataCenter related activities:
- o   Designing the **network topologies** and choice of proper hardware (eg. cabling, connectors, switches)
- o   **pfSense** Gateway Router serving DHCP, DNS, Firewall, Tailscale
- o   Management of **100Gbps** Mellanox switches with custom Debian install utilizing the **mlnxsw** driver and SwitchDev. RDMA traffic configuration and switch ASIC HW parameters configuration.
- o   **iPXE** netbooting, netboot.xyz menu & logic customizations.
- o   PDU SNMP power monitoring
- o   Seagate 5U84 racking up & provisioning
- o   **FAI** (Fully Automated Installer) Custom Debian **Zero Configuration** installer images
- o   BMC Out Of Band server management using IPMI and RedFish
- o   Mellanox ConnectX (3,4,5) Linux Kernel performance optimizations & tuning. Alignment of CPU cache-lines, NUMA nodes to NICs with IRQ core-pinning techniques to minimize latency.
- o   Preparing & benchmarking OS environments for HPC which involved exposure to SPDK, NVMeOF intricacies.

>_ Filecoin directly related
- o Lotus Node & Miner/Sealing Worker provisioning maintenance and troubleshooting and hardware configuration and experimenting.
- o Built hardware, provisioned, and maintained a Full Archival Node, hosting 30TiB(s) of chain data all the way back to genesis block.
- o Built **Lua** scripted custom HAproxy load-balancer and HA solution for FileCoin Lotus nodes.
- o Provisioned custom 512MiB Sector sized Filecoin networks with full ownership for various testings and simulations.
- o Built solutions using Ansible and HashiCorp nomad for generating on-demand multi-miner 2k networks for simulations and running tests against. It enabled the team to develop features depending on notaries and verified clients ourselves at 0 cost and full control.

>_ Software Engineering:
- o Developed specialized observability services for in-house software in **Rust,** extracting valuable sealing pipeline metrics.
- o Contributed to Job/Queue management backend in **Go**
- o Written automated console interactive installer CLI tool in **Go**

>_ Google Cloud Platform
provisioning & maintenance with leading an external devops contractor firm to achieve the following:
- o **Terraform** controlled **GCP** resources
- o **GKE** (Google Kubernetes Engine) administration and automation development
- o **VPC Security:**
  - ▪ **CertManager** for automated SSL provisioning and renewal behind Cloudflare SSL proxy
  - ▪ **HashiCorp Vault** for dynamic secret injection using init containers
  - ▪ **Cilium** configurations and increased security in multi-tenant cluster by encrypting Cluster inner traffic using
  - ▪ **OpenVPN**, later replaced with **WireGuard** and VPC configuration and **CloudNAT** configurations to control sensitive information endpoints access.
- o **Observability:** ELK Stack: ElasticSearch, Kibana, LogStash, FluentBit
- o **GitHub Actions** CI/CD reusable templates for each new GKE K8S tenant/repo.

AltLabs
2020-2024

Multiple Roles
Serbia (remote)

Infrastructure Engineer | 2021
Role #1

>_ NFT Marketplace (for Wolfram Mathematica)
- o **AWS (EKS) provisioning & maintenance of the following:**
    - ▪ **Terraform** controlled **EKS** cluster instantiating
    - ▪ self-hosted **DroneCI** implementation that was integrated / triggered by GitHub PRs.
- o Laying out the Software Architecture with the devs and involvement in the FastAPI (Python) implementation discussions and queue background job processing.

>_ Self Hosted Monitoring K8S Cluster (from scratch)
- o Ansible provisioned MicroK8s, k3s with Kustomize and Traefik (as Ingress Controller)

Network Engineer | 2021 – Present
Role #2

>_ Server Room setup HW provisioning
Did everything from empty room(s) to 3 Racks
- o Built & delivered a custom routing/gateway/firewall solution mostly Softwarepartially **HW Offloaded** router solution in the Office building using **VyOS** using **Mellanox ConnectX** cards & consumer grade PC.
- o **Mikrotik** RouterOS/SwitchOS CLI/WebUI management and SNMP extraction.
- o Coordinated technicians to deliver a total of **144** CAT6A wall and ceiling jacks spanning 3 floors.
- o Involved in 2 Floor **WiFI 6E** solutions using Aruba, TP Link access points.
- o Provided a multi-month flawless internet connectivity solution to **200+ devices** to a sub-leased company on the 3rd floor, before their own solution was delivered by the local providers.

Cardano - Plutus Pioneer Program
2019

SmartContract Developer
(remote)

- ▪ Implemented a DEX (Decentralized Exchange) using **Haskell** and the Plutus smart contract framework.
- ▪ Collab with the UI team that did the browser invoking of the SmartContracts and backend(s) I've built.
- ▪ Worked with development environments using **Nix**

Novotec Engineering
2019-2021

Full Stack Developer
Switzerland (remote)

Worked on a platform that was trying to achieve a 1-click deployment, similar to Digital Ocean (App Platform)
- ▪ 1-click deployments included:
    - o Isolated Kubernetes on-demand cluster (per tenant)
    - o Rancher
    - o App Templates (eg. PostgreSQL) per cluster
- ▪ Backend in **Ruby** On Rails and **Python**
- ▪ Generating Ansible scripts used for automated provisioning for on-demand **K8S** clusters
- ▪ Kubernetes provisioned included Rancher and Rook-Ceph
- ▪ Frontend admin solution to provide the 1-click App parametrize & deploy.
- ▪ Integrated **Vue.js** Rails using backend-rendered html along with highly customized Webpack integration(s) for easier development, as isolated self-contained components, that can be reused if plugged in different pages.
- ▪ Assembled and managed team of a designer and frontend developer to work on a ERP Procurement custom Ruby/Vue.js software solution.

- Managed various in-house software backend/frontend self hosted legacy apps.

Local Projects
Full Stack Developer

<div align="right">2019</div>
<div align="right">Serbia (remote)</div>

This was a part-time period, after the previous job, when I've got involved with some experimental stuff with ex-Colleague and Mercurial, and the following projects:

Backend + Frontend for a Mercurial (version control)
- o Vue.js frontend for a code management app (Quasar UI framework)
- o Simple **Kubernetes** Infra
- o **Elixir** backend
- o **Rust** for some glue code for **Mercurial** (because Mercurial was being internally refactored to use more **Rust** back then)

Mobile App for a tile grout company using Vue.js/NativeScript for the Mobile App UI involved:
- o **iOS** / **Android** app development & **publishing**
- o Backend in **Django** (Python) & generated Web Admin interfaces.
- o **Celery** (Distributed Task Queue)
- o Interaction with SMS endpoints provided by third parties.

AgriCircle gmbh
Full Stack Developer

<div align="right">2015-2018</div>
<div align="right">Switzerland (remote)</div>

- I've worked on a web app GIS (Geospatial Information System) used by German and Swiss farms for precision agriculture. Implemented a European standard for tractor machinery automation.
- Processing & overlaying satellite & drone imagery of near-infrared spectrum over farm fields in backend and frontend. And producing tractor machinery automated instructions to increase crop yields and reduce farm costs by 30%.
- Produced vector map projections importing and adaptation software for each individual canton in Germany
- Developed a tractor trajectory visual debugging tool for data received from tractor's onboard computer.
- Built a bridge between Ruby <=> Python for geospatial calculations using the GDAL library
- **Python, Ruby on Rails, Javascript, React, Kubernetes, Docker**

YourGrocer Pty Ltd
Full Stack Developer

<div align="right">2014-2015</div>
<div align="right">Australia (remote)</div>

- eCommerce website for grocery delivery
- Responsive mobile/web apps for drivers to quickly manage their delivery inventory
- Responsive mobile/web app for retail workers to quickly manage their stock inventory
- **Ruby on Rails, Angular**

Mindhyve
Developer

<div align="right">2014</div>
<div align="right">Dubai (remote)</div>

- Worked for an agency from Dubai delivering web frontend & backend projects. While managing a team of 3.
- Online management system for conferences (managing agendas, events, API, reports)
- Online solution on waste management and recycling materials (frontend, backend, API, reports)

Freelancing Upwork/Elance

Developer

2009-2014

(remote)

The period involved mostly exposure the Linux, Bash, PHP, Python, JavaScript
- Community website for sharing desktop UI setups
- Doctor scheduling appointment backend & WebUI
- Social network for families backend & WebUI (facebook for families with advanced image tagging capabilities)
- Payment gateway integrations
- Various archaic frontend (pure javascript, jQuery web/mobile, Backbone, Marionette

EDUCATION

ICT (www.ict.edu.rs**)**   **2010-2012**

Bachelor of Computer Science (Specialization Engineering)   *Belgrade, Serbia*
- This was a specialization period that involved similar classes as the base years.
- Working with Java on payment credit cards

ICT Belgrade (www.ict.edu.rs**)**   **2007-2010**

Bachelor of Computer Science   *Belgrade, Serbia*
- C, C++, C#, Java, Java SE, PHP, Linux, ASP .NET, VB .NET, Android, SQL Server
- CISCO routers, Networking, DSP signal processing

GENESIS

Activities of Interest preceding any formal education or professional work   **2002-2006**

Script Kiddie times
- OllyDbg (ReverseEngineering Windows binaries)
- Pascal & Delphi classes
- Having fun with online "Hacking Challenges" (don't remember the websites back then), IRC scripting & remote trojan injection, WinBash scripting and having fun with self-replicating homemade software viruses
- Hacked own ISP POP3 servers (got phone call afterwards that's hard to forget)

CERTIFICATIONS & TRAINING

- **Memory Thinking in Rust:** Online Training (Software Diagnostics Services) in-memory view from language structure and behavior analysis perspective and teaches Rust language aspects and relevant code internals Windows (x64) and Linux (x64 and ARM64) platforms using gdb, WinGDB and VSCode debugger.

SKILLS, & INTERESTS

- **Skills**
  - Infrastructure Management, Server Provisioning, Network Design
  - Cloud Platforms (AWS, GCP, GKE), Kubernetes, Ansible, SaltStack, Cilium,. CertManager, CertBot, Nginx, Traefik, Caddy, HAProxy
  - Programming Languages: Go, Rust, Python, Ruby, C/C++
  - Scripting Languages: Bash, Zsh, Perl, AWK
  - Networking: DHCP, DNS, pfSense, VyOS, RoCEv2, NVMeOF, Tailscale, WireGuard, OpenVPN,
  - Storage: ZFS, NFS, BTRFS, GlusterFS, MDADM, XFS
  - Virtualization: XCP-ng (Xen), Docker, Singularity Containers, Nomad, VirtualBox, VMware Fusion,
  - Strategic Planning, Tech. Recruiting, Hardware Inventory Forecasting
- **Tech Interests**
  - Reverse Engineering
  - Memory Dump Analysis
  - HPC trends
  - RTOS and embedded operating systems
  - Microcontrollerrs, unusual CPU architectures & devboards
  - Understanding low level territory
- **Interests**
  - *Heavy Metal Guitar,*
  - *DIY*
  - *Specialty Coffee*
  - *Scuba Diving*
  - *Corporate Psychology*
  - *Metalworking*
  - *Woodworking*
  - *3D Printing*
  - *Cats (I got 4 of em)*