MAX JACOBY

INFRASTRUCTURE ENGINEER
TECHNICAL DESIGN ENGINEER

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I'm interested in building optimised and performant infrastructure to shave every millisecond possible off response times. I'm excited by the prospect of combining my mindset as a designer and deep knowledge of networking, storage and underlying architecture to design effective, high performing and cost effective solutions in the cloud and on-prem. With my technological skill set spanning a multitude of disciplines, I'm adept at tackling almost any problem. Looking forward, I hope to apply those skills to transition into cloud architecture design.

EXPERIENCE:

Head of IT

Three Tunnels Ltd · 2022 - 2025

System Administrator & Developer for an online retailer.

Responsibilities:

» **Management of IT solutions:** Deployed and managed on-premises website hosting & office IT infrastructure to ensure smooth day-to-day company operation, including network configuration and file storage systems.

» **Site frontend:** UI/UX design, AB testing, GDPR compliance, SEO, CPC marketing, content creation.

» **Site backend:** Deployment on Kubernetes, upkeep of underlying infrastructure, site reliability, performance optimisation, disaster recovery plans. Defining SLOs and monitoring SLIs using GA4, Prometheus and Grafana.

Key Achievements:

» **Re-platforming of e-commerce site:** Successfully led the migration from managed hosting to an on-premises solution. The site was completely redesigned from the ground up to minimise costs, raise performance above that of competitors and improve user experience. Continued SEO & maintenance efforts yield continual on year-on-year increases in active users, engagement time, and sales.

» **Robust Kubernetes Deployment:** Although deployed on-prem, the stack was designed to be cloud native. Stateless pods with dynamically provisioned shared storage ensure high availability and allows for horizontal auto-scaling to accommodate traffic spikes. A hybrid cloud approach provides load balancing with HAProxy, including HTTP/3 over QUIC and disaster recovery provisions in a worst case scenario. My efforts have resulted in 99.9% yearly uptime.

» **100/100 Page Speed Index:** With effective deployment design, efficient caching, and network tuning, I was able to raise the site's Google PageSpeed score by ~140%, attaining a perfect 100/100 in the Performance and Best Practices categories.

Web Design & Managed Hosting

Freelance · 2020 - 2025

» **Web Design:** I design and maintain websites for clients, tackling branding, interface design, custom graphics, search engine optimisation, content writing, and anything else required. From complex e-commerce sites to personal portfolios, the sites have a range of custom requirements which would otherwise be too expensive with other manged hosting services. With my understanding of core web principles, I am able to optimise each site for optimum performance, and agile enough to implement cutting-edge best practices to provide my clients with the best value for money.

» **Infrastructure and Platform Design:** To host the websites, I maintain a local cluster of servers, creating a hyper-converged Proxmox environment where I deploy production workloads. This gives me day-to-day practice in managing and maintaining services with expected uptime. The cluster is redundant, highly available and fast, using Ceph as a storage backend for VM and container storage. The cluster runs a range of software, but mainly uses Docker and Kubernetes for hosting.

Sound Engineer & Owner

Flint & Steel · 2022 - 2024

» Successfully built, rented and ran an 8kW sound system to power raves and music events of up to 300 capacity.

» **Client Management:** Sourced new clients, ensured the satisfaction of regulars, negotiated payments and raised invoices.

» **Responsibility:** Being the sole employee, I had to develop strategies to transport and deploy the system by myself, and have a plan for all eventualities. If the sound system doesn't work, the event doesn't run. Failure was unacceptable and I had to be able to fix any problems as they arose on the road. I build it, I run it.

Gin Distiller, Cocktail Waiter, Wine Expert
Padstow Wine Company · 2021 - 2024

» **Client skills:** Excellent at maintaining relationships with customers, remaining friendly and personable even under stressful conditions.

» **Trusted:** As a key holder my responsibilities included opening & closing, cash up, stock management, training new employees and the law abiding sale of alcohol.

» **Accuracy:** Distilling of alcohol is a highly regulated, and every drop must be accounted for. Attention to detail is essential.

» **Knowledge Absorption:** Required to learn a large volume of WSET knowledge in a short space of time.

Event Crew Member
Alpha Crew · 2023

» **On Call & Punctual:** Crew members would fill their own 24/7 schedule with jobs. Planning and time management were essential to arrive on jobs across London on time or early, every time. The client's satisfaction and company's reputation relied on our punctuality and professionalism.

» **Team Skills:** Regularly moving huge objects, the risk of severe injury is high. A unified effort was mandatory; Listening and accurately following the Crew Chief's instruction was essential for the safety of all. Each job was in a different location with a different crew, so being able to quickly integrate with others was part of the job, remaining calm and focused on long shifts.

OTHER SKILLS

» **Scripting and Programming:** Python, Bash and C. My most recent project was creating a RAG based voice assistant in python using local Llama 3.1 to catalogue and recall notes. This, in particular, taught me to effectively use Git and VS Code.

» **Homelab:** In addition to my local production cluster, I use spare hardware to teach myself deploy and manage FOSS, and enterprise software where available. This includes ZFS, Ceph, GlusterFS, Docker, Kubernetes (k3s & k8s), Proxmox/QEMU, Citrix/XCP-NG/Xen Hypervisor, VMware ES Xi, Nextcloud, LEMP stacks, and more. I continue to use it to learn current practices like observability, CI/CD and IaC.

» **Content Creation:** Comfortable behind and in front of a camera. I make YouTube videos and use the Adobe Suite, Cinema 4D and Maya to create detail oriented animations, renders, graphics and logos.

» **FURTHER SKILLS:** To view my whole portfolio consider taking a look at my website **(errantminds.net).** It showcases my work and hobbies which demonstrate a range of practical skills.

EDUCATION & QUALIFICATIONS

Product Design & Technology BSc
Loughborough University · 2024

» Graduated with upper Second-Class Honours, specialising in advanced computer aided manufacturing.

» Designed and manufactured a fully functional, touring grade loudspeaker monitoring and protection system, which was awarded the Functional Prototyping Award and successfully used in real world scenarios. The EM1 wirelessly monitors and reports statistics on the speaker's physical limits over MQTT, and automatically limits the volume before damage occurs, with the goal of saving time, money and headache for sound engineers.

Bishop's Stortford College · 2018

» 3 A-Levels, 10 GCSEs

Dual Passport - British & German Citizenship

» Allowed to work & live in the EU.

KUBERNETES · CEPH · DOCKER · PROXMOX · XEN HV · ZFS · TCP/IP · GIT · PYTHON
C · SMTP/MAIL · WORDPRESS · NGINX · SQL · SOLIDWORKS · ADOBE SUITE