

Systems Engineer – Infrastructure

London, England, United Kingdom

The Firm

XTX Markets is a leading algorithmic trading firm which uses state-of-the-art machine learning technology to produce price forecasts for over 50,000 financial instruments across equities, fixed income, currencies, commodities and crypto. It uses those forecasts to trade on exchanges and alternative trading venues, and to offer differentiated liquidity directly to clients worldwide. The firm trades over \$250bn a day across 35 countries and has over 250 employees based in London, Singapore, New York, Paris, Bristol, Mumbai, Yerevan and Kajaani.

We leverage the talent of the people who work here, modern computational techniques and state-of-the-art research infrastructure to analyse large data sets across markets quickly and efficiently, to maximize the effectiveness of our proprietary trading algorithms. We are actively seeking new methods and ideas. The models that drive our trading strategies have evolved considerably over the last 10 years, from econometric methods that gave our company its name, to trees, to neural networks, to modern deep learning architectures.

XTX Markets has an unrivalled level of computational resources in the trading industry, with a growing research cluster currently containing over 25,000 GPUs with 650 petabytes of usable storage. Teams across the firm include world-class researchers with backgrounds in pure math, programming, physics, computer science and machine learning. The firm is also constructing a large-scale data centre in Finland to future-proof its significant computational capabilities.

At XTX Markets technology is our business and we are a diverse organization which attracts outstanding talent from across all industry backgrounds. We are focused on teamwork and our people collaborate on all aspects of the business, working openly and with respect for each other, our clients and the market. Our culture is non-hierarchical and one where everyone is valued. We strive for excellence in everything we do.

The Role

The Shared Engineering team at XTX Markets develop systems and infrastructure which the rest of the firm relies on. Our aim is to produce robust tools and services so that other teams can help themselves use them with minimal oversight.

This software development role is ideal for someone who is interested in solving infrastructure-level problems in the simplest manner possible using concise and efficient code. We develop in Go, but knowledge of this language is not required up-front.

Some examples of the products we develop and maintain are:

- in-house job scheduling.
- in-house monitoring.
- metrics collection and visualisation.
- in-house network automation and configuration management tooling.
- Kerberos infrastructure, secrets management, ssh proxy and similar.
- general purpose Linux build system and our in-house secure Linux distribution.
- central asset database used by procurement, finance, datacentre operations and others.
- company-wide monorepo, build and deployment system.

In addition, we operate the traditional infrastructure relied on by other teams, especially post-trade and low-latency OTC trading systems. You can expect to get your hands on servers, network switches and storage systems as well as writing code to manage these elements.

Responsibilities

- Design, develop and improve our systems which other teams use, promoting re-use and self-service.
- Reduce manual activities by automating complex processes and systems, some without formal APIs.
- Mentor other team members, improving their knowledge and making sure they can maintain the systems you develop.

- Be on-call to troubleshoot problems spanning several technical domains for current and legacy infrastructure. We operated a schedule to ensure responsibilities are even distributed throughout the year between a team of 12.

Essential Attributes

- Able to code fluently in a language such as Go or Python and be competent with Bash and C. We estimate someone with about 5 years' experience would be the right fit but we are open to reviewing a range of experience levels.
- Expert use of standard development tools/techniques such as git, IDEs and CI/CD.
- In-depth knowledge of Linux and host-level TCP/IP networking, include protocols such as DNS and DHCP. Working at the CLI should be second nature to you.
- Demonstrate practical experience of automation, showing how you introduced new applications which had a positive impact and were used by a wider community of users than just your immediate team.
- Evidence of building excellent relationships with your peers across an organisation.

Desirable Attributes

Some knowledge of these technologies is desirable, but not essential for a successful application:

- web front end development (TypeScript, React).
- containerisation/virtualisation technologies such as Docker, Podman and KVM.
- observability infrastructure, e.g. Victoria Metrics, Prometheus, Grafana.
- configuration management using Terraform, Bash, Python or similar tools.
- hands-on networks and associated technology (e.g. STP, BGP, OSPF, MPLS).
- working knowledge of hardware (out of band management for servers, NetApps, console servers, network switches, etc.).

- knowledge of low-latency trading systems, particularly with regards to counterparty connectivity and precise timing infrastructure.

Benefits

- Onsite gym, sauna, and fitness classes at no charge.
- Extensive medical benefits including an on-site doctor and therapist at no charge.
- Breakfast and lunch provided daily.
- Various supports for caregivers, including emergency dependent care.
- Beautiful Kings Cross office: <https://vimeo.com/257888726>
- 25 days paid holiday per year + statutory holiday and paid sick days.
- Generous Pension contributions.
- We work 4 days per week in the office, 1 from home unless stated otherwise.