

Job Specification

Software Engineer (Networking / Distributed Systems)

Responsible to:	Head of Software Engineering
Grade of post:	Scientist / Senior / Principle (Depending on experience)
Salary:	To be agreed / per annum
Hours of work:	37 hours per week
Work location:	Oakley, Bedford. Hybrid working available.

Role Purpose:

Blue Bear is a leading autonomy and unmanned systems company. We are continuously innovating within the core area of Unmanned Aerial Systems (UAS/UAV) such as autopilots, mission systems and ground control stations.

We are searching for engineers to assist in the development of the next generation of our swarming UAV technology, their supporting systems and networks including both onboard and desktide – including development and simulation.

This role will help architect, build and test both our embedded and server-based products with a particular focus on the networking side. A strong understanding of IP, Transports such as TCP/UDP and higher-level protocols will there be required operating within a Linux environment.

Supporting knowledge of distributed systems such as virtualization, security practices and databases will also be useful.

Key Responsibilities

- Contributing to the correct architecture, configuration and maintenance of the networks within our products and general systems.
- Able to suggest, investigate and deploy suitable tools for use both within our products and in the wider department.
- Development of software utilising these networks in OO languages such as C++/Java respecting constraints such as software redundancy, real-time, safety and security.

Essential

- A strong understanding of Linux across Desktop, servers and embedded devices such as Raspberry Pis.
- Software engineering experience in OO languages such as C++/Java with exposure to distributed systems.
- Working in an agile team using JIRA (or similar) to manage assigned work, and source control using git.
- A deep knowledge of networking at multiple levels of the OSI stack, including IP, TCP/UDP and Application layers. Knowledge of tools such as iptables, or tcpdump would be very helpful.

Desirable

- Experience in the use and configuration of virtualisation software for test and simulation. We mostly use VirtualBox orchestrated with Ansible so knowledge of these will be useful.
- Some sysadmin skills to help setup and maintain the tools used to develop the software including e.g. JIRA, Artefactory running on Linux servers.
- Scripting in languages such as shell or Python
- Experience in debugging and tracking down hard to find problems using tools such as nmap, wireshark.
- Knowledge of good security practices and supporting technologies such as TLS/SSL used to achieve them.
- Experience in interacting with, or even administering databases such as MySQL or postgres.
- SC Clearance

Other Duties and Responsibilities

- Help develop and support ongoing process improvement within the department and wider business
- To undertake such other duties and responsibilities as may be reasonably required within the grade and level of the post.
- The opportunity will enable to gain knowledge of cutting-edge autonomous systems.
- You will be expected to perform different tasks as necessitated by your evolving role within the company and the overall business objectives of the company. Some travel within the UK may be required.

What's in it for you

- Work in a small, friendly company on the cutting edge of swarm autonomy.
- See your work in action flying on our own fleet of custom-built UAVs
- Hybrid working available
- Career development
- Competitive Salary

Equality and Diversity

We are committed to the promotion of equality of opportunity in all of our activities and to encouraging access to our organisation from all groups irrespective of the equality strands. We are working to create an environment in which cultural diversity and individual difference are positively valued in an atmosphere free from harassment and discrimination. We take our legal and moral obligations with respect to equal opportunities seriously and welcome dialogue with individuals on ways in which our equal opportunities policies and practice can be enhanced.

Health and Safety

The organisation together with the assistance of all employees are fully committed to developing a positive safety culture.

We encourage and support employees becoming involved in and participating in health, safety and welfare matters. Our goal is to motivate and empower all employees to work safely and protect their long-term health, not simply to avoid accidents.

PERSON SPECIFICATION

Education/Qualifications	S/L	I	A
<i>Desirable:</i>			
<ul style="list-style-type: none"> Degree in Software Engineering or STEM discipline with a demonstrable aptitude for networking within a Software Engineering context 	X		
Knowledge and Experience			
<i>Essential:</i>			
<ul style="list-style-type: none"> Linux Experience 	X	X	X
<ul style="list-style-type: none"> Network configuration and protocol understanding 	X	X	X
<ul style="list-style-type: none"> Network log analysis and problem solving 		X	
<ul style="list-style-type: none"> Network security awareness 		X	
<ul style="list-style-type: none"> Software Engineering Experience (including Source control) 		X	
<i>Desirable</i>			
<ul style="list-style-type: none"> Linux administration and network management 	X		
<ul style="list-style-type: none"> Virtual machine setup and configuration 		X	
<ul style="list-style-type: none"> Database management/administration 		X	
<ul style="list-style-type: none"> Server application installation and maintenance 		X	
<ul style="list-style-type: none"> Knowledge of build / configuration tools for linux (e.g. Yocto, Cmake) 		X	
<ul style="list-style-type: none"> Debugging of network issues 		X	
<ul style="list-style-type: none"> Use of JIRA - Application Lifecycle Management tool 		X	
Personal/Behavioral Attributes			
<i>Essential:</i>			
<ul style="list-style-type: none"> Creative and innovative thinker 		X	
<ul style="list-style-type: none"> Excellent problem-solving skills 		X	
<ul style="list-style-type: none"> Good analytical and communication skills 		X	
<ul style="list-style-type: none"> Passion for innovation 		X	
<ul style="list-style-type: none"> Ability to work to tight deadlines 		X	
<ul style="list-style-type: none"> Team player 		X	
Other Requirements			
Subject to security vetting to a minimum BPSS level	X		

S/L = Short Listing I= Interview A=Assessment