



## SYSTEMS TEST ENGINEER

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**COMPANY:** e2E SERVICES LTD.  
**JOB REF:** RES.049  
**TYPE OF ROLE:** PERMANENT  
**PRIMARY LOCATION:** WELWYN GARDEN CITY, HERTFORDSHIRE  
**CLIENT LOCATIONS:** LONDON



### **Our Company**

e2E has been at the forefront of innovation in the space sector, specialising in satellite communications, for two decades, offering to all our world-wide stakeholders unrivalled expertise to design, develop and operate state-of-the-art solutions and systems. Our portfolio of consultancy services and technology know-how covers the entire spectrum of any satellite communication project, from market opportunity sizing and end-user requirements down to ground network development and operations. To both commercial and defence related domains, we also offer unique modular and agile technology to enable a more user-friendly and accessible use of satellite communication resources.

Innovation and ingenuity are the guiding principles of anything we do for our customers. Working with e2E requires a high level of dedication and personal motivation, commitment and a drive to continually seek to strive to improve – and the results consistently achieved over the years, at both personal and team levels, are outstanding and make e2E a great place to work.

### **Job Description**

Our team is involved in establishing the assurance and test programmes for satellite communications networks for both civil and military customers. These networks can involve GEO, MEO and LEO satellite constellations.



## SYSTEMS TEST ENGINEER

We are expanding our team and are seeking a **Systems Test Engineer** to support the ongoing test programmes that are necessary to ensure mission success. This role will typically require development of the verification/test strategy which encompasses system and sub-system acceptance, integration and end-to-end system and acceptance test campaigns for cutting-edge satellite communications networks.

The successful candidate is expected to undertake a variety of test activities, primarily on the ground segment networks of advanced satellite communications networks and supported communications services. Working closely with e2E's clients on their test campaigns before, during and after communications service launch, the successful candidate will be responsible for undertaking a variety of test-related activities and related communications systems engineering tasks including the development of test strategies, plans and procedures / test scripts at system, sub-system, network and end-user terminal levels.

e2E requires an excellent understanding of computer networks with system level breadth and troubleshooting depth, ideally (but not exclusively) gained via a typical satellite system project. This interesting and varied work will be incorporating both space and ground segments, and requires test systems and systems engineering knowledge in addition to experience gained in distributed IP networks.

The successful candidate is ideally expected to be able to demonstrate experience of many - but not necessarily all - of the following skills, experience and responsibilities.

### Key Responsibilities

- Design, develop and prepare VV&T (Validation, Verification and Testing) strategies and plans, environments, facilities and equipment for complex mobile and fixed networks and their associated test environments.
- Development and execution of test cases which will incorporate IP-based service networks, satellite payload, ground systems, satellite radio networks, OSS and BSS technologies
- Identifying and troubleshooting system communication paths, capacity performance and network devices as well as conducting post-test data analysis and reporting.
- Creation of test reports to document issues and assist development with the investigation and resolution of issues.
- Review/comment on 'testability' issues, obvious design flaws, anticipate data collection points and develop plans for and conduct anomaly test and analysis as required.

### Skills, Character and Experience

- Experience of IP networks: designing, building, configuring (routers, switches), maintaining, faulting / troubleshooting, testing (e.g. routing, load testing, performance), network security / policies and associated documentation.



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- Experience of creating test procedures / cases / scripts which may include the incorporation of satellite payload (communications, optical), ground systems, mobile and satellite radio networks, IP and service networks.
- Experience in testing and/or fault analysis and faulting tools (e.g.: iPerf, Wireshark, Spirent or similar).
- Experience of software scripting tools (e.g. Python, TCL, Javascript, C/C++ or similar).
- Experience of testing user interfaces (UI/UX).
- Experience using test management tools (e.g. Jira, X-ray).
- Strong analytical skills, the ability to identify key issues and to solve day-to-day challenges and issues and to report upon and present KPI (Key Performance Indicator) and SLA (Service Level Agreement) information.
- Experience of working as an integral part of a highly focused team; self-motivated and enthusiastic even when under pressure.
- Good customer-facing and communication skills with ability to produce and present clear, concise and unambiguous presentations to customers and other clients
- An ability to develop innovative solutions to defined problems; adaptable to new requirements and changing priorities.
- Awareness of both commercial and technical issues.
- Willing to travel nationally and internationally where required (project dependent, short durations, for example to support test execution campaigns).

### **Essential**

- Graduate with a good Honours or Masters degree in a relevant subject (e.g.: Computer Networks, Space Systems Engineering, Software Engineering / Computing, Electronics, Communications); equivalent qualifications and/or experience will be considered as an alternative.
- Experience and knowledge of IP network design, protocols (e.g. network layer, transport layer), security; experience of network troubleshooting, including identifying and solving problems and issues and associated knowledge of networking concepts (e.g.: TCP-IP, DNS, DHCP, Network Routing, ICMP, OSI model).
- Testing experience in a variety of environments (system end-to-end testing, stand-alone/integration testing, factory acceptance testing and operational networks), ideally but not mandatorily gained in satellite communication technologies / networks via a global satcom network provider.
- Experience of planning VV&T test campaigns, including strategy, conducting tests, collecting and analysing data from tests, communicating results and anomalies to test management and the customer through both presentations and formal test reports.
- Experience of installation and configuration of network equipment (e.g. iDirect modems / devices, Cisco and/or Juniper routers, switches, servers).
- Experience of hypervisor installation and management (e.g.: Type 1, ESXi VMWare, KVM).
- An appreciation of systems engineering processes and operational environments.



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### Desirable

- Chartered Engineer or equivalent.
- Experience of mobile wireless broadband / LTE / GSM for mobile devices and data terminals.
- Experience of IP-based satellite communications systems.
- Experience with network challenges associated with systems integration, including COTS (Commercial Off The Shelf) integration, capacity and performance analysis and system architecture design.
- CCNA certified.
- Experience or knowledge of network design and architecture (e.g. spine-and-leaf network architecture).
- Skills necessary to evaluate network hardware, software, algorithms and processes to verify and characterise network capability.
- Experience with ESA project and documentation processes and familiarisation with ECSS and other standards.
- Experience in the commissioning and testing of satellite systems (space and/or ground segment based) with a leading satellite network operator (GEO and/or non-GEO).
- Experience in assessment/development of security architectures in a communication systems and/or military communications networks / systems.
- Knowledge and experience of test programming languages, automated test environments and scripting.

### Salary

- Attractive compensation package dependent on skills/experience plus a growing list of Company benefits
- By submitting your CV/application you are consenting to e2E Group using and storing information about you for monitoring purposes relating to your application of future employment. This information will only be used by e2E Group.

e2E Group is committed to achieving workforce diversity and welcome all applications irrespective of social and cultural background, age gender, disability, sexual orientation or religious belief.

