



SYSTEMS TEST ENGINEER I

Department: Systems Management

Location: Montreal, Canada (Hybrid)

Status: Full-time- Permanent

Date Posted: January 13, 2022

Are you interested in joining an organization that?

- Has over 30 years of experience providing innovative software simulation solutions in the Air Traffic Management (ATM) and Air Traffic Control (ATC) fields?
- Provides products and services to governments, colleges and universities, and defense and civilian ATC agencies worldwide?
- Offers a pay-for-performance compensation structure, tuition reimbursement, and access to various professional development opportunities?
- Has work/life balance programs in place and offers a holistic benefits package that is fully customizable based on your specific needs?

If this sounds interesting to you, continue reading about our job vacancy below.

The Systems Engineering group, reporting to the Director, Systems Management, is responsible to develop the system solutions, considering both software and hardware sub-systems, networks, interfaces both internal and external, plus security, reliability, availability and maintainability requirements. The Systems Engineering group is responsible to develop the strategies that componentize our many product lines, to recommend appropriate R&D initiatives that support our product roadmaps and to recommend using 3rd party solutions where and when appropriate.

The Systems Test Engineer I is responsible for the system-level testing, including the validation of the system architecture, the verification of system integration and installation procedures, the validation of external third-party solutions, that are delivered to our customers to achieve their operational and technical requirements. He develops and maintains the traceability of test procedures to the overall system solution (architecture, design, interface, etc.), and to non-functional requirements (technical requirements, security, reliability, availability, and maintainability constraints) necessary to meet the operational objectives of the system. The Systems Test Engineer I is part of a multi-disciplinary development team responsible to deliver the complete system solution.

Essential Duties and Responsibilities:

The Systems Test Engineer I is accountable, through the application of systems engineering processes and best practices, for the delivery of the following:

System Solution

- **Requirements Analysis:** Work with the Product Owners and Systems Engineers to understand and clarify the customer needs, requirements and constraints, and, from there, establish the success criteria and test procedures to validate non-functional requirements of the overall system.
- **Design:** Collaborate with the System Engineer and System Integration Engineer, in the context of Test-Driven Development, to provide Test Procedures and associated Success Criteria, as input to system design.
- **Integration:** Collaborate with Systems Engineers and System Integration Engineers to develop and document detailed test procedures (and traces) to validate overall system architecture, to verify non-functional customer requirements, considering all aspects of the integrated solution: SW and HW components, networks, interfaces, 3rd party sub-systems, configuration and deployment, maintenance, failure recovery, etc.
- **Reviews:** Participate in requirements review, requirements allocation and customer reviews (SRR, PDR and CDR), while providing test plan and success criteria for non-functional requirements. Review Systems Engineering documentation
- **Documentation:** Responsible to create and maintain the Non-Functional Acceptance Test Document (Technical ATD), the system-level and integration test procedures, and keep updated the traceability of these tests to customer, system and hardware requirements.
- **Verification and Validation:** In collaboration with System Engineer and Integration Engineer, create System Level Test Plans covering both nominal and failed mode of operations, to ensure that the as designed solution meets all non-functional requirements, and continuously improve system-level testing, including test automation.

Program Execution

- **Testing:** Responsible for the execution of the system non-functional tests, the documentation of test reports and the traceability to hardware, system and/or customer requirements.
- **Leadership:** Provide system-level test management throughout program execution. Establishes the standards for non-functional requirements testing methods, process, tools, etc.
- **Outsourcing:** Responsible for validating the system-level integration of System solution parts outsourced to external suppliers, to ensure deliverables meet Adacel's technical and quality requirements.
- **Deficiency Report:** Raise issues and defects for non-conformities resulting from System Level Testing, then verify and validate the solutions when fixed.

Technical Roadmaps

- **Roadmaps:** Develop more efficient system test procedures, including system test automation, test results review and system performance analysis.
- **Pre-qualification:** Pro-actively provide benchmark measures to pre-qualify hardware components in order to address customer needs, technology trends, etc.

Proposal Design-to-Win Solutions

- **Proposed Solution:** Provide the necessary “constraints” and “guidance” to the functional teams by establishing a test plan for the high-level non-functional requirements.
- **Estimates:** Estimate the effort for the system-level testing associated to the non-functional requirements.

Other

Performs other duties as assigned by Supervisor.

Required Qualifications:

- Bachelor’s degree in Computer Science, Engineering, or related field.
- Knowledge of real time system architectures: Hardware infrastructure, Software client-server application, networks, storage, redundancy, 3rd party integration, etc.
- Strong problem-solving skills and willingness to roll up one’s sleeves to get the job done.
- Excellent written and verbal communication skills.
- Experience with test procedures write-ups.
- Knowledge of Microsoft Office products such as Word, Excel, PowerPoint, and Outlook.

Desired Qualifications

- Knowledge of domain-specific topics (Air Traffic Management, operational and simulation systems, etc.).
- Knowledge of requirements traceability and verification.
- Experience with Linux or other UNIX operating systems.
- Experience with Scripting languages such as Python or equivalent.
- Intermediate hardware, networking, maintenance/repair skills.

How to Apply:

You may apply by sending a copy of your resume to careers@adacel.com

Adacel Inc. is an Equal Opportunity employer. We value diversity and we are committed to creating an inclusive environment for all employees. All qualified applicants will receive consideration for employment without regard to age, civil status, disability, ethnic origin, language, political convictions, pregnancy, race or color, religion, sex, sexual orientation, social condition or gender identity or expression.