Energy Management Systems Engineer (Technical Career Path)

Location: Omaha, NE
Closing Date: 08/12/2016 at 11:59 PM Central Time
Job Open To: Internal and External Candidates

Description

This position will perform the technical effort of testing Energy Management systems, create and execute test plans and cases, and oversee lab testing efforts. The position will also define functional requirements, specify system interfaces, analyze performance, work with vendors, maintain back office systems, and manage the deployment and health of the Energy Management system. The position is responsible for working with multiple vendors and departments to develop, implement, operate and improve the system.

Energy Management systems are deployed onboard locomotives to aid the engineer in the safe and fuel efficient operation of the train (managing fuel, speed, force) by modeling train dynamics over the territory, determining proper speed profile, computing train physics in real time and providing automated control of the locomotive throttle and brake system.

This position is a technical position in IT as part of the Career Path Process. The technical career path is for employees interested in an individual contributor role, who want to work with other team members to ensure a project's success. The main elements of the technical path include: 1) No direct reports, 2) Heavy technical skills, 3) Heavy teamwork, 4) Heavy client/customer contact, 5) Heavy daily planning and execution, 6) Creativity and 7) Participation in interviewing process.

Union Pacific does NOT provide sponsorship for this position. Applicants who would now or in the future require sponsorship from Union Pacific in order to obtain, extend, or renew authorization to work in the U.S. are ineligible for this position. This includes applicants on the following work visas: F-1 Visas (including CPT and OPT), H, J, M, TN, any and all other Visas that require Union Pacific Sponsorship.
Accountabilities

• Perform the testing to integrate the vendor supplied Energy Management system as a stand-alone locomotive system and as a system that is integrated with Positive Train Control. Position is expected to author and execute test plans and cases. Position has heavy interaction with Operating Practices, Operating Systems, Mechanical, IT/Telecom, Supply and vendors to perform testing, define requirements, diagnose system operation, report on and maintain the system.

• Test the systems, manage defects, document and report on system operation. Analyze problem reports, identify defects, determine root cause and recommend corrective action.

• Design and specify system interfaces, define product enhancements, monitor vendor performance and determine development priorities.

• Provide technical direction for the software deployment and configuration of the system on the locomotive and in the back office. Position is responsible for the management of a business critical application, working with IT and Operating teams to maximize the availability and use of the system.

• Position works with railroad departments to test operational enhancements and is expected to develop an understanding of train handling and operating practices and apply that understanding to the testing of technical system requirements.

• Interact directly with the people and equipment in the field environment to develop the knowledge of railroad operating rules and practices that is necessary to safely participate in the deployment of the Energy Management system.

• Some travel to the field to observe and validate operation of the system aboard a train is expected.

Qualifications

Required

• A Bachelor Degree in Computer Science, Computer Engineering, Management Information Systems or related field. Strong applicable experience (a minimum of 10 years engineering experience) may be taken into account in lieu of a degree.

• 6+ years of testing, quality assurance, and engineering experience. The ideal candidate will have a mix of software engineering, systems engineering and hardware engineering experience.

Preferred

• Experience with UNIX/Linux, one or more programming languages, shell scripting, SQL, messaging, and IP networking.

• Experience with railroad operations, Energy Management systems, and Positive Train Control.
• Experience with real time operating systems, control feedback mechanisms, statistics, physics, radio systems and the internals of computer systems.
• Demonstrated experience in the product life cycle from definition, design, and development through to implementation and maintenance of a complex IT system.
• Experience with safety systems and associated standards.

Department

Operating Services handles the core function of Union Pacific – delivering transportation services. The Operating Department is the largest department with more than 47,000 employees throughout 20 service units providing world-class service to customers. Operating Services strives to run a safe, incident-free workplace, while providing consistent and reliable rail service.

Company

Union Pacific is one of America’s premier transportation and logistics companies, linking 23 states in the western two-thirds of the country and serving many of the fastest-growing U.S. cities. Generations of Americans have built successful careers at Union Pacific and in the process, they’ve helped build a nation – delivering lumber for our homes, food for our tables, energy for our power plants and the countless raw materials and finished goods that supply the American way of life.

Union Pacific supports diversity in the workplace and is an Equal Opportunity Employer inclusive of protected veterans and individuals with disabilities.

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