



**TRIANGLE
MICROWORKS, INC.**

SOLUTIONS FOR COMMUNICATION PROTOCOL DEVELOPMENT

www.TriangleMicroWorks.com

About Triangle MicroWorks

For 30 years, Triangle MicroWorks (TMW) has been providing solutions for standards-based communication protocols in the Electrical Utility Industry.

Our primary goal at Triangle MicroWorks is to provide innovative and reliable solutions with timely support for our customers. We enjoy building personal relationships with our customers and understanding their needs. Today, Triangle MicroWorks serves hundreds of Utilities, Manufacturers, and system integrators from over 50 countries.



Triangle MicroWorks has grown over the years to provide a wide array of Communication Protocol solutions including Communication Protocol Software Libraries, PC-based Test and Configuration Tools, OPC drivers, and Protocol Gateways. TMW's Software Libraries and Tools support industry-standard communication protocols including DNP3, IEC 61850, IEC 60870-5, IEC 60870-6 (TASE.2/ICCP), OPC, and Modbus.

Available Jobs

- 1. C/C++ Programmer/ Software Engineer**
- 2. Software Test/Applications Engineer**
- 3. Senior Technical Support Engineer**
- 4. Technical Marketing Associate**

See detailed job descriptions attached.

1. C/C++ Programmer/ Software Engineer

The Communication Protocol Software Engineer position is responsible for supporting and developing software components for communication protocol libraries used for communications between intelligent electrical substation equipment. The position also includes testing the protocol libraries including the creation of unit test code. The position requires competency in the C/C++ programming language and experience with developing communications protocol stacks. This position involves both software development and customer support activities.

RESPONSIBILITIES:

- Support customers by debugging software and analyzing customer product configurations. Use networking tools such as Wireshark to investigate communication issues.
- Assist in developing and maintaining communications protocol libraries.
- Create unit test code to test the communications protocol libraries.
- Help maintain an automated build and test environment for the software libraries. Perform manual verification on build packages before product releases.
- Occasionally help customers port software libraries to new hardware and operating systems.
- Implement new features in software libraries for communications protocols as needed.
- Use software test tools to analyze software for quality and security issues.

EDUCATION, EXPERIENCE and SKILLS REQUIRED:

- Minimum of seven years of experience in software development using the C and C++ programming languages.
- Strong experience using and/or implementing communication protocols is required.
- Experience with Linux and Linux build environments is required.
- Experience programming embedded; real time applications is required.
- Experience with Windows, .Net Framework, and Visual Studio is preferred.
- Experience with communications in utility industries is preferred.
- Experience testing software, especially communications software, is desired.
- Bachelor's or higher level degree in computer science or electrical engineering is required.

2. Software Test/Applications Engineer

POSITION DESCRIPTION:

We are looking for an engineer to test software to target SCADA communication protocols by following specifications used in the electrical utilities industry. As more experience is gained with our products, this position will involve into working with our customers to create custom demonstrations of our products tailored to their applications and helping customers work through level 2 support issues that may require replicating the customer's issue. The knowledge gained as an interface between the customer and our engineers can then be fed back into testing and the next generation of our products.

RESPONSIBILITIES:

- Test software by creating automated test scripts to test the user interface of communications gateways and test tools to verify requirements and defect corrections.
- Write manual test scripts with detailed instructions and expected results to test communications gateways and test tools.
- Use both written requirements and personal knowledge of the communications protocols and substation operation to craft the test scripts.
- Create written test plans incorporating both automated test scripts and manual test scripts using a test plan creation tool.
- Execute test plans to test software applications and communications libraries.
- Perform manual steps indicated in manual test cases and record results. Use automated software testing tools to execute automated test scripts and review the results of automated test scripts.
- Update written defect reports which have been marked as corrected by software engineers with the results of test script execution.
- Review QA checklists to prepare tested software for release to customers.
- Provide customer support related to product issues by setting up and using substation simulation software to emulate customer environment, communication traffic and recreate conditions of reported problems.
- Review user manuals and other product documentation for accuracy. Recommend changes for readability and markup corrections.
- Test software against instructions provided in user manuals.
- Write test fixtures and unit tests to verify low level communications libraries, verify conformance to published specifications.
- Write test software using a test framework such as NUnit test and integrate the test software into an automated test execution system.

EDUCATION, EXPERIENCE and SKILLS REQUIRED:

- Bachelor's degree in Computer Science or Engineering plus 5 years of experience in the job offered or related software testing position.
- Must have 3 years of experience working with at least one of the following SCADA communications protocols: DNP3, IEC 60870-5 or IEC 61850.
- Must have 1 year of experience testing industrial communications gateways.
- In the alternate will accept 7 years of experience in the job offered or related software testing position.

3. Senior Technical Support Engineer

POSITION DESCRIPTION:

We are looking for a Senior Technical Support Engineer to provide product support assistance to our customers. You will diagnose and troubleshoot software problems and help our customers install applications and programs. Our products are software applications that test and simulate data communications between electronic equipment used in electric utility substations. Applicants to this position must have experience supporting complex software that is used in computer networks and industrial communications systems. Experience in the electrical utilities industry is a plus.

Senior Technical Support Engineer responsibilities include assisting customers with configuration of our software products, investigating problems customers may be experiencing with the products, assisting with licensing problems, and answering general questions about the capabilities of our products. The position works directly with customers and with the internal engineering team to solve problems of varying complexity. You will use email, virtual meeting applications, remote desktop, and phone to work with clients. You must be able to provide clear written and verbal instructions.

If you're naturally a helper, enjoy assisting people with product issues and are able to explain technical details simply, we'd like to meet you. Ultimately, you will be a person our customers trust. They will rely on you to provide timely and accurate solutions to their technical problems.

RESPONSIBILITIES:

- Learn our products including the details of how to use them and concepts of what they do.
- Research and identify solutions to software and hardware issues.
- Diagnose and troubleshoot technical issues, including network configuration, licensing issues, product configuration, etc.
- Work to reproduce reported problems in software products.
- Ask customers targeted questions to quickly understand the root of the problem.
- Track product issues through to resolution, within agreed time limits
- Talk clients through a series of actions, either via phone or email, until they've solved a technical issue.
- Properly escalate unresolved issues to appropriate internal teams (e.g., software developers)
- Provide prompt and accurate feedback to customers.
- Refer to internal database or external resources to provide accurate technical solutions.
- Ensure all issues are properly logged.
- Prioritize and manage several open issues at one time.
- Follow up with clients to ensure their applications are fully functional after troubleshooting.
- Document technical knowledge in the form of notes and manuals; Technical Writing Experience a plus
- Maintain positive relationships with clients.

EDUCATION, EXPERIENCE and SKILLS REQUIRED:

- Proven work experience as a Technical Support Engineer, or similar role working with complex software based products.

- Must have previously provided product support for software applications, devices, or systems that utilized complex software.
- Hands-on experience with Windows/Linux OS environments
- Good understanding of computer systems and computer networking
- Excellent problem-solving and communication skills
- Ability to provide step-by-step technical help, both written and verbal
- Some programming and/or computer scripting skills are preferred.
- Experience in utilities industry is highly desired.

4. Technical Marketing Associate

POSITION DESCRIPTION:

The Technical Sales Associate is responsible for ensuring our sales, support, and quality assurance teams deliver the best possible solutions to our customers. Triangle MicroWorks desires a person who is a self-starter, energetic, and positive. Applicants must be highly organized, customer focused, and capable of managing multiple tasks in a dynamic environment.

RESPONSIBILITIES:

Marketing Activities

- Plan and monitor the ongoing company presence on social media (Twitter, Facebook etc.) Be actively involved in SEO efforts (keyword, image optimization etc.)
- Analyzes, reviews and implements changes to websites so they are optimized for search engines.
- Measure performance of digital marketing efforts using a variety of Web analytics tools (Google Analytics, Web Trends etc.)
- Create content for website, email, and marketing materials.

EDUCATION, EXPERIENCE and SKILLS REQUIRED:

- Minimum of three to five years of experience with marketing of technical products and services
- Bachelor's or higher level degree in a technical field
- Ability to communicate clearly and concisely, both verbally and in writing
- Strong computer skills including Word, PowerPoint, CRM software, Excel, and software tools used in typical high tech business environments.
- Personable, confident, energetic professional who has successfully worked as part of a team.
- Must have excellent interpersonal skills and experience working directly with customers.

ADDITIONAL PREFERRED REQUIREMENTS:

- Background in communication protocols
- Experience with engineering software (design, simulation, testing)
- Experience with sales and marketing of technical software applications
- Work experience within the electric utility industry is a plus.