

Network Management Software Engineer Job Description

GC Photonics is seeking an Network Management Software Engineer to be part of an innovative R&D team following today's lean product development paradigm and the open-source model.

The position requires the candidate to become the subject matter network in element and network management of both closed and white box optical networking devices architected by the company. The optical networking devices involve a broad range of software and hardware technologies. The software technologies include the latest network management and embedded Linux and RTOS software. The hardware technologies include optical modules, digital signal processing, high-speed digital and analog design, management agent processors, and embedded asymmetrical processing units. The successful candidate will be a hands-on individual contributor who can translate high-level design into detailed formal design specification documentation, and provide supervision and guidance to a remote team who will do the design implementation and testing.

- Primary responsibility is to participate in a cross functional team that will translate customer requirements into high-level solutions, and then detail the software design in clear formal requirements and specification documentation consisting of Software Requirements Documents, and Framework and Feature Software Detailed Design Documents.
- Provide guidance to a remote team that will implement and test the design. Time zone differences between the teams will require early morning and/or evening conference calls as required to maintain real time communication between the teams.
- Provide assistance in problem resolution with the design implementation when escalated from the remote team.
- Participate in design reviews and code reviews as required.
- Provide input to test plans and certification testing as required.
- Responsible for technical design evaluations and failure analysis.
- Generate effective solutions that are imaginative, thorough, practical and within cost and time targets.
- As a member of a small team it will be expected that additional special projects and other duties may be assigned as required, which can be challenging at times, but makes for an stimulating working environment.

Education and Work Experience

- Requires a BS/MS/PhD degree in Computer Engineering or Computer Science.
- Ideally 5 plus years with management software design for high-availability Telecom/Datacom applications.

Desired Experience

- Experience developing management and system level object-oriented software in an embedded Linux environment.
- Experience with NETCONF/YANG adapters and other similar adapters for multi-vendor orchestration space automated optical layer services for interfacing to SDN controllers.
- Experience in YANG modeling, YANG datastores, SNMP to YANG conversion will be of benefit.
- Experience in RESTful architecture and creating REST APIs will be of benefit.
- Knowledge in SDN/ODL and the ONF Control Plane southbound interface (CPSI) and OF-Config is an asset, but the initial focus is the Management Plane southbound (MPSI).
- Knowledge of SDN Controller management traffic simulation and network modeling tools is an asset.
- Knowledge of using simulators for embedded systems software development is an asset.
- Coding experience in mixed C and C++ telecommunications systems platforms
- Knowledge in specifying and coding APIs for Linux and real-time operating systems is an asset.
- Coding experience in interpretive scripting languages like Python, Tcl for testing is an asset for the testing phase of the product.
- Experience with software requirements object-oriented analysis and software modeling such as with UML 2.5 and eclipse to visualize the design of a system is an asset.
- Familiarity with current software integrated development environments, open source software libraries, software version control and design tools.
- Familiarity with transport protocols such as Ethernet, SONET/SDH, OTN.
- Experience working with geographically distributed teams.
- Excellent oral and written communication skills.
- High accuracy in work, attention to detail.
- Competent with Microsoft Office products.
- Chinese speaking is an asset.