PEA Job Description

1. Position Identification

Position Number: 993718, 993686, 993494, 993393, 993365, 992492, 992493, 992494, 992495, 992496, 992497
Position Title: Junior Software Developer
Department: Ocean Networks Canada
Reports to: Associate Director, Software Engineering
Number of Direct/Indirect Reports Direct 0  Indirect 0
Classification Level SG 6
Current Incumbent (if applicable)
Last Updated March 2017

2. Position Summary

Ocean Networks Canada (ONC) is a world-leading organization supporting ocean discovery and technological innovation. ONC is a not-for-profit society that operates and manages innovative cabled observatories on behalf of the University of Victoria that supply continuous power and Internet connectivity to various scientific instruments located in coastal, deep-ocean, and Arctic environments. ONC’s cable arrays host hundreds of sensors distributed in, on and above the seabed along with mobile and land-based assets strategically located, instruments that address key scientific and policy issues (subsea earthquakes and tsunamis, ocean acidification, marine biodiversity, etc.) within a wide range of environments.

ONC’s User Engagement Division is responsible for supporting and growing ONC’s scientific and research user communities through direct support for new and ongoing user research initiatives on the one hand, and education, development of data products and other web-based data access and visualization tools on the other. As part of the User Engagement Division, the Software Engineering group, under the guidance of its stakeholders delivers software that empowers users in accomplishing complex tasks, in dealing with data volumes of increasing size and complexity.

The Junior Software Developer will participate in the design and implementation of software components aiming at processing and publishing data from ONC instruments and controlling these instruments or the observatory infrastructure.

The Developer reports to the Associate Director Software Engineering (Associate Director), with work assigned on a project basis or in an area of continuing responsibility, which will be reviewed for progress toward the stated objectives.

3. Key Responsibilities and Expectations

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<th>Key Responsibilities</th>
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| Software design and development (85%) | • Completes projects as assigned by the Associate Director Software Engineering (Associate Director)  
• Designs and codes new features and functionality based on requirements collected  
• Reviews and understands business requirements as a participant in cross-functional teams  
• Participates in design and code reviews  
• Develops, maintains, and documents software process using established templates  
• Maintains a database of problem reports and new developments (using the Jira tool) |
Develops test suites based on previous work project for software development and testing
Ensures that effective code is completed within timeline provided
Reviews software to identify weak spots and opportunities to improve coding
Participates in software maintenance and design improvements
Contributes to software development best practices

Assists with production support issues as they arise
Stays up to date with current and emerging technologies and programs for coding development and design processes
Present son new technologies, programs and methodologies to software development team
Analyses research papers and ONC publications to understand the context in which ONC operate and the application of the data managed by the User Engagement group

4. Classification Factors:

Problem-Solving:
Critical analysis and creative problem-solving are essential attributes of the Junior Developer. The Junior Developer is required to identify and solve design problems, including finding and repairing bugs. Innovative approaches may be required when traditional resolution methods have been exhausted.

Responsibility for Financial & Material resources:
This position does not have responsibility for budget or materials expenditures, but has shared responsibility for design, implementation and maintenance of software components.

Responsibility for Human Resources:
The Junior Developer works very closely with others in the Software Development team and their work will be reviewed for accuracy and quality assurance. However, the position performs standard and routine assignments independently to conclusions, and only unusual problems are referred to a supervisor or senior developer.

Impact of Decisions and Actions:
The Junior Developer plays a key role in the success of the Software Development team, which functions as a service delivery department to a broad, global user base. The position directly impacts the efficiency of the Software Development team, and therefore impacts the ability of the department to achieve the strategic objectives of ONC and to satisfy internal and external stakeholders.

Independence:
The Junior Developer will exercise independent decision making with regard to their independent software design and development projects.

5. Summary of qualifications:
The Junior Developer will have a college diploma in computer science and a minimum of 1 year of development experience.

Experience Requirements:
- Proven ability to write design, build, test and debug software
- Demonstrated proficiency in the following technologies: J2EE, JavaScript, HTML, XML, SQL
- Experience in object-oriented design and implementation

Knowledge:
- Relational database management systems such as Oracle or MySQL
- Software lifecycle and Agile methodologies such as Scrum
- Web services and service-oriented architectures

Competencies:
• Ability to work independently and proactively within a team-oriented environment
• Excellent written and verbal communication skills
• Excellent problem solving skills
• Ability to learn new technologies

Highly desired assets:
• Familiarity with the Eclipse development environment and with tools such as Velocity and Hibernate as would be some knowledge of the messaging system.
• UNIX skills
• Bash or other scripting language
• Experience installing and configuring software packages
• ActiveMQ troubleshooting/knowledge
• Experience in scientific data processing MATLAB, R, SciPy, data visualization, statistics, time series analysis, and analytical science in general.
• Test automation
• Familiar with JUnit testing

Employee’s Signature:  Date:

Manager’s/Supervisor’s Signature  Date: