

NEPTUNE Canada

UNIVERSITY OF VICTORIA

NEPTUNE & VENUS Observatory Operations Specialist

The NEPTUNE Canada and VENUS projects represent a total of over \$90M to establish innovative regional cabled observatory systems with hundreds of sub-sea scientific instruments in the deep sea off the coast of British Columbia. This effort is part of the \$250M bi-national NEPTUNE project, in which US partners include the NSF ORION Project Office, the University of Washington, the Woods Hole Oceanographic Institution, the NASA Jet Propulsion Laboratory and the Monterey Bay Aquarium Research Institute. The Canadian contribution to the project is made possible by funding from the Canadaiaaoundation for Innovation and the BC Knowledge Development Fund. The University of Victoria hosts the two projects. The goal is to utilise the recent advancements in fibre optic communication technology to enable scientists on shore to probe the mysteries of the ocean and allow the world to share in the incredible discoveries. The development of powered, fibre-optic cabled observatories covering a wide range of marine environments will allow, for the first time, real-time observations that will establish a comprehensive interactive database and decadal time-series. Details of the NEPTUNE project can be found on the websites: <http://www.neptunecanada.ca/>, <http://www.orionprogram.org>, and <http://www.neptune.washington.edu/>. VENUS, already operating, is present under <http://www.venus.uvic.ca/>.

Responsibility:

As a member of the NEPTUNE Canada Data Management and Archive System (DMAS) group, the successful candidate will be involved in the remote monitoring and control of the NEPTUNE and VENUS cabled ocean observatories. Tasks will include running monitoring software, checking activity logs, acting upon the infrastructure in case of problems etc. Moreover, the observatory operations specialist will be involved with other team members in the installation, implementation, administration, maintenance and ongoing support of all systems used for the observatories management, including hardware, software as well as networking components necessary to operate the NEPTUNE Canada and VENUS DMAS. Duties will include conducting log analysis, fault detection and remediation. The successful candidate will also be responsible for the observatory's master configuration database.

Duties and responsibilities:

In detail, the duties will include:

- Daily systematic checks of activity logs from the previous unstaffed period
- Reporting of issues and their resolution in an electronic logbook (e.g., Wiki)
- Following manufacturer's instructions in the resolution of a problem
- Ensuring, through pro-active measures, maximum uptime of the installations
- Updates of the observatory configuration database, in particular to reflect changes in the science instruments configuration after maintenance cruises.
- Using great care and attentiveness in dealing with sensitive equipment

Job knowledge requirements:

The duties will require a significant experience in some or all of the following areas:

- Familiarity with computer-based log books, schedulers, calendars etc. such as wikis, Office packages is essential
- Practical use of Unix/Linux and Windows based systems is essential .
- A sound understanding of structured databases as well as of IP networks would be an advantage
- The ability to automate monitoring tasks through scripting would be a plus

- The capability to understand a complex power and data transmission system, acquired through formal education or otherwise
- Familiarity with computer-based monitoring and control systems such as HP OpenView would be a significant advantage
- Experience in the operation of Telco grade managed switches and routers an advantage
- Experience in the operation of SONET equipment and advantage
- Experience in the operation of DC systems an advantage

Educational Requirements:

The successful candidate will have at least an undergraduate degree in Electrical Engineering or Computer Science and several years of closely related experience or equivalent mix of qualifications and experience. Essential qualifications include excellent problem solving and interpersonal skills as well as a strong technical background in relevant technologies.

Profile of the person:

NEPTUNE Canada and VENUS are looking for a highly motivated individual who will have a passion for participating in large scientific research endeavour. The successful applicant will have the ability to make operational decisions impacting a highly sophisticated system. S/he will moreover report suggestions to supervisory personnel and is expected to perform the duties within a growing team, therefore a good team spirit together with professional work practices, in particular where operational systems are concerned, is required. The ability to learn new technologies and implement them in a secure and reliable manner is essential.

Reporting Line:

The successful candidate will report to the Operations Systems team lead, with work assigned on a project basis or in an area of continuing responsibility, which will be reviewed for progress toward the stated objectives. S/he may have to supervise or provide technical direction to more junior analysts or specialists also assigned to those projects.

Work location:

The work shall primarily be performed on the University of Victoria campus, at the NEPTUNE Canada premises. Some work will be performed at the Shore Station in Port Alberni, and there will be occasional trips to shore stations located in Sidney and Vancouver.

Working time:

Working time will normally be 35hr/week with occasional on-call duty outside regular working hours.

Conditions:

This position is initially a contract to Dec. 24, 2008. As we move into the operational phase however, NEPTUNE Canada expects to turn this position into a continuing one, contingent to the availability of sufficient operating funds for the project.

Closes at 4:30pm on June 21, 2007

