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Careers

Job Details

INFO TECHNOLOGIST 4 - RES. COMPUTING SYSTEMS ANALYST - 0887

Compensation Group A.E.S.E.S**Faculty** I.S.T. Computer & Network Svc.**Department** General Office**Position History** Existing**Position Type** Budget funded Continuing**Work Schedule (Select)** Full time: 35 hours per week**Additional Information** Must be available to work occasional overtime.**Estimated Weekly Hours** 35**Salary (Hourly)** \$32.04 - \$42.44**Salary (Annual)** \$58,312.80 - \$77,240.80**Proposed Start Date** 2012-09-04**Probation/Trial Period** 420 hours worked**Qualifications**

Education:

- Bachelor's degree in Computer Science, Computer Engineering, or equivalent experience is required.
- MSc or PhD research experience would be an asset.

Experience:

- Must have several years of experience and in-depth knowledge of Linux administration including compiling, installing, and porting software systems, dealing with security issues, installing and maintaining drivers, and general troubleshooting.
- Experience with High Performance Computing as well as provisioning systems (e.g. Kickstart) or cluster management software (e.g. Rocks, XCAT or Oscar) would be a definite asset.
- Experience with application programming (e.g. using C/C++, Python, or Java) or scientific programming (e.g. using Matlab, C/C++, Fortran, BLAS, or LAPACK) would be an asset.
- Experience with HPC scheduling tools such as Torque and MAUI/MOAB would be an asset.

Skills & Abilities:

- Must have knowledge of key protocols such as DNS, DHCP, LDAP, NFS, SNMP, SMTP, HTTP, SSL etc.
- Must have strong scripting skills (e.g. Python, Perl, Ruby, Bash) and experience with automation. Must have a demonstrated track record of planning, organizing, scheduling, and managing complex projects to completion.
- Must have an outstanding ability to independently learn new skills and technologies.
- Must be able to work co-operatively with peers and clients, both local and distant.
- Must be able to communicate effectively with team members and users of the facility.

Key Responsibilities

Characteristic Duties & Responsibilities:

The Research Systems Administrator has specific accountability to provide system administration support of High Performance Computing (HPC) systems that are part of Compute Canada and used by researchers from across Canada. The incumbent may also be required to support research servers that are local to the University of Manitoba. The incumbent is responsible for analyzing and evaluating researcher requirements and designing and implementing related solutions. This also includes responsibility for system configuration, implementing security, monitoring and capacity planning, installation and configuration of core applications.

The primary responsibility is to work with the Compute Canada Site Lead on the administrative support of the Compute Canada HPC Cluster including:

- Provide support for the operating system by identifying, analyzing, researching and resolving problems; providing patch updates; and making configuration changes.
- Install, configure, maintain, patch and trouble shoot packages, utilities, Linux drivers and software systems as required.
- Ensure that the operating system and system software are up to date and continually look for and address potential security issues.
- Write scripts and programs to be used in monitoring and managing the Compute Canada HPC Cluster, including those for automating common tasks and those of monitoring of security threats, software issues, and hardware issues.
- In the case of equipment failure, determine the most rapid course of action to repair or replace the damaged server or components (including liaising with the vendor) so as to minimize downtime for the affected system.
- Maintain the internal network of the cluster (consists of Ethernet and Infiniband switches) and diagnose external routing issues and do Linux firewall management.
- Continually look to optimize the system administration (e.g. via automation) of the systems.
- Prepare contingency back-out plans.
- Design and implement effective security configurations.
- Coordinate activities with applicable researchers to ensure limited disruption.
- Monitor and measure systems performance and report issues.
- Support and assist researchers who are using the systems.
- Collaborate with other Compute Canada technical staff both locally and at other universities.
- Attend meetings and conferences with fellow system administrators within Compute Canada, both physically and via video conferencing.

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