Systems Administrator

Who We Are

The Canadian Research Knowledge Network (CRKN) is a partnership of Canadian universities, dedicated to expanding digital content for the academic research and teaching enterprise in Canada. Through the coordinated leadership of librarians, researchers, administrators and other stakeholders in the research community, CRKN undertakes large-scale content acquisition and licensing initiatives in order to build knowledge infrastructure and research and teaching capacity in Canada's universities.

On April 1st, 2018 CRKN merged with Canadiana.org which has allowed our teams to cohesively pursue a united and coordinated strategy to leverage Canadian heritage and scholarly content. As a merged organization, CRKN will continue its core licensing activities for scholarly journal content, while expanding support for the digitization, access and preservation of Canadian heritage content through the services of Canadiana.

The Role

The Systems Administrator extends the capacity and capabilities of the Canadiana Trustworthy Digital Repository (TDR) platform and associated services and tools, and ensures their ongoing operation, availability, integrity and security.

Reporting to the Lead Systems Engineer or designate and working closely with the Lead Application Developer, the Systems Administrator manages the day-to-day operation and maintenance of the organization's cloud-based computer systems, Linux servers and network infrastructure, monitors internal and public-facing services to ensure availability and security, and performs regular upgrades, repairs and modifications to hardware, software and networks.

Duties and Responsibilities

1. **System and network administration (75%)**
   - Determine hardware and software requirements and specifications
   - Procure, build, test, deploy and maintain server and network hardware, and liaise with external providers with respect to same
   - Determine and maintain standard hardware and software configurations, disk images and deployment procedures
   - Manage maintenance schedules and evergreening cycles for server and system hardware and software
   - Coordinate the shipping, receiving, installation and replacement of hardware components at remote sites
   - Monitor system health and security; detect and respond to incidents, and perform preventative maintenance
   - Manage the upgrading and patching of operating system and other software
   - Monitor computer and network usage to diagnose network congestion and optimize performance
   - Recommend hardware, software, computer use and security policies for the organization
   - Manage the creation, maintenance and verification of regular system and data backups

2. **Object storage migration (20%)**
   - Plan and coordinate execution of a migration from current custom object storage and access system built on ZFS to system based on OpenStack Swift
   - Provide training and support to development staff on the use of Swift as clients. Provide training to other system administrators on the management of Swift services.

3. **Other (5%)**

- Coordinate with network and other service vendors
- Coordinate the development and setup of new points of presence with hosting partners
- Train staff and partners on the architecture and use of network systems, hardware and software
- Coordinate the safe movement of server hardware and other equipment
- Other duties as required

In a small team environment everyone is expected to work towards overall CRKN goals and at times a team effort is required that may involve taking on tasks outside the normal or expected scope of their role. Other duties may be assigned as required.

Qualifications:

The ideal candidate will have a degree in computer science and at least five years' experience with system and network administration and engineering and/or software development, or an equivalent combination of education and experience. The ideal candidate will possess or be eligible for Reliability Status from PWGSC. Other relevant and desirable education, skills and experience include:

- Knowledge of server hardware architecture and experience building and managing server hardware
- Expertise in local and wide area network architecture and management (LAN/WAN), including Ethernet hardware (switches, VLANs, link aggregation, cabling, diagnostics) and TCP/IP networking (routers, VPNs, NAT, firewalls, DNS)
- Remote server management using IPMI and ssh
- Virtualization techniques and technologies, especially: KVM and Docker
- Object storage systems, with OpenStack Swift required and ZFS an asset
- System monitoring tools, especially: Icinga and Nagios
- Configuration management, especially Puppet
- Version control systems, especially: Git and Subversion
- Ability to lift as much as 30 kg with the assistance of another person

Benefits

CRKN offers a generous benefits package including vacation, health and dental benefits, and pension match.

Term
Full-time, One-Year Term (with possiblity of extension)

Location
Ottawa, Ontario

Note: CRKN encourages proposals from its member or stakeholder communities for a secondment or academic leave to fill this position.

To Apply

Please send a letter of application and resume via email to:

> Canadian Research Knowledge Network
> Attn: Russell McOrmond, Lead Systems Engineer
> Email: hr@crkn-rcdr.ca

(Please reference **Systems Administator** in the e-mail subject)

Closing date: Friday, December 7th, 2018

We thank all applicants for their interest in CRKN, however only those candidates selected for an interview will be contacted.

CRKN is an equal opportunity employer, with policies and practices intended to build an inclusive and accessible work environment. If you require accommodation during the recruitment process, please include in your cover letter when applying for the position and all efforts to provide the appropriate accommodation will be put into place.