HUMAN RESOURCES
SIMON FRASER UNIVERSITY
ADMINISTRATIVE & PROFESSIONAL STAFF
JOB DESCRIPTION

A. IDENTIFICATION

Position Title: Computer Systems Administrator
Department: School of Computing Science
Position Reports To (Title): Manager of Research and Instructional Services, Computing Science
Date: July 11, 2017

B. POSITION SUMMARY

The Computer Systems Administrator manages the acquisition and implementation of hardware and software systems, and multiple servers and workstations for instructional, research, and administration use. The incumbent of the position installs, configures and troubleshoots network, system, and application software and hardware. The Computer Systems Administrator responds to problems related to complex computer applications and systems; diagnoses failures and provides emergency and permanent repairs; maintains software for networked systems; and monitors and manages databases, backups, logs, and journals.

C. DUTIES AND RESPONSIBILITIES

Manages the acquisition and implementation of hardware and software systems for instructional, research, and office administration use, and determines when upgrades and enhancements in hardware, software and network services are required.

Manages multiple servers and workstations by ensuring proper integration and operational efficiency.

Manages systems by considering security measures, data safety and integrity, disaster failover and recovery and develops and implements system deployment procedures.

Plans and implements system security policies which include firewalls, host and client access restrictions, file permissions and user accounts.

Designs and develops methods and procedures for collecting, organizing, interpreting and classifying system logs and other data for input and/or retrieval.

Designs and programs systems to meet client needs by installing and debugging new and/or upgraded software on server and client platforms and ensures compliance with site license agreements.

Installs, configures and troubleshoots all hardware, peripherals and equipment necessary to meet integrated systems objectives.

Troubleshoots network, system and application problems to identify and correct malfunctions and other operational problems.

Responds to problems related to complex computer applications and systems for faculty, staff and/or students by using fact-finding procedures, knowledge of work processes and procedures and familiarity with related programming practices, application, and system software and computer, network and/or multimedia equipment.
Provides technical guidance and instruction in the use of computer technologies and in the planning, design, implementation, conversion and operation of a range (i.e., business, instructional, research, multimedia, etc.) of nonstandard applications, systems and devices and servers in mixed operating environments.

Develops and writes systems and applications documentation, configuration manifests and guides and maintains catalogs detailing configuration, installation instructions, network resources, problem resolutions, etc.

Reviews, evaluates and recommends emerging software and hardware solutions and conducts assessments of the impact of such within existing operating environments.

Diagnoses application failures and provides emergency repairs, recommends and implements corrective action to ensure a smooth operation of the systems.

Maintains networked systems including local and internet-based systems by identifying, analyzing and correcting problems to ensure a stable and reliable operation of application systems.

Develops and implements systems to high standards by analyzing, developing, testing and implementing open source and proprietary software in order to operate and maintain systems more effectively and productively.

Provides expert level technical support by researching, testing, evaluating, recommending and implementing hardware and/or software solutions to maintain and develop new or existing systems for personal computers as well as networked systems.

Monitors and manages backups, logs and journals and installs, maintains and upgrades software and restores and/or recovers data.

Designs and implements integrated hardware and software computer and information systems to meet client objectives.

Provides support for specific technology for courses and instructional infrastructure, including the automation of assignment collections and marking, and the implementation of security tools to ensure a secure environment for exams, and other needs, as required, to support a high quality Computer Science program.

Provides individual or group training and instruction for research, instructional, student and/or administrative personnel on computer technologies.

Writes scripts, installation manifests, and similar controls using relevant scripting languages to support efficient deployment and management of systems.

Develops, implements, and monitors security procedures and protocols to ensure systems are protected.

Manages hardware and software inventories, site and/or server licensing agreements and user access.

Interacts and collaborates with other information technology staff in Computing Science, Applied Sciences, and SFU to share knowledge and develop shared services and solutions and to ensure that services are delivered to users in a consistent manner.

Assists with the preparation of the annual budget by evaluating the needs for computing resources of the School.

D. DECISION MAKING

i) Makes decisions regarding:

- Technical decisions within the parameters of existing computing science systems.
- The allocation of computing resources within typical day-to-day operations.

ii) Refers decisions regarding:
• The development of new system standards and/or policies on user services, network reconfiguration, and upgrades.
• The allocation of resources which impact future availability.

E. SUPERVISION EXERCISED

Number of employees reporting directly to the position. 0
Total number of employees for whom the position has direct responsibility. 0

F. SUPERVISION RECEIVED

Works under general guidance of the Manager of Research and Instructional Services, Computing Science.

G. UNUSUAL WORKING CONDITIONS

Will be required to accomplish some activities off prime hours due to systems availability.

Will be required to work as necessary to solve system problems on a 24/7 basis.

The School of Computing Science is a multi-campus department with integrated hardware and software systems which require multi-campus coordination. This position will be based at the Burnaby campus, but may be assigned duties on the other campuses.

H. ENTRANCE QUALIFICATIONS

Bachelor’s degree in Computing Science or a related Applied Science field and five years of related experience which includes network and systems administration in an environment using Linux and Windows Server and Desktop, Mac OS, Virtualization hypervisors, and clients, storage and processor clusters, firewall and router configuration, network management tools, OS and software deployment and configuration tools, or an equivalent combination of education, training, and experience.

Excellent knowledge of PC based servers, PC’s and peripherals, network routing and design, cloud based computing, virtualization and system security.

Good knowledge of current operating system deployment and configuration methods (i.e., Puppet, Foreman, Munki, WPKG, WDS, etc.) or equivalent.

Good working knowledge of and ability to use cloudStack, FreeNAS, VMWare, EqualLogic SANs or equivalent.

Ability to specify, deploy, and maintain Linux and Windows Servers, Linux, Windows, and Mac OS workstations, virtualization hypervisors and virtual machines.

Experience of analyzing and troubleshooting hardware and network malfunctions.

Excellent organizational, communication (both oral and written), and interpersonal skills.