

## **JOB DESCRIPTION**

**TITLE OF POSITION:** Systems and Network Administrator  
**POSITION #:** SY-095  
**SERVICE UNIT:** IT Operations and Quality Assurance  
**REPORTS TO:** Supervisor, Infrastructure Services

### **PRIMARY PURPOSE**

Through its services and products, CCOHS advances health and safety in Canadian workplaces, and the physical and mental well-being of Canadians.

The IT Operations and Quality Assurance service unit provides infrastructure and computer systems support for CCOHS, and is responsible for ensuring the security and availability of all production technology products and services, in addition to the mandate that all development and infrastructure production changes are thoroughly tested and validated.

The Systems and Network Administrator is responsible for installing, configuring, administering and optimizing server, network and personal computer hardware and software to achieve high levels of availability and security of the supported business applications. The incumbent participates in the planning and implementation of policies and procedures to ensure system deployment and maintenance that is consistent with CCOHS goals, industry best practices, and government requirements. The incumbent is responsible for planning and purchasing of hardware and software for use on servers and personal computers.

	<u><b>DUTIES</b></u>	<u><b>% OF TIME</b></u>
1.	<u><b>System Administration</b></u>  Manages servers, including web, e-mail, processing, file, spam filters and backup servers and their associated operating systems and software. Plans and implements server upgrades, maintenance fixes, and vendor-supplied patches. Administers and maintains virtual hosts on-premises and in the cloud. Administers and maintains end user accounts, permissions, and access rights. Performs server backups and recovers files as necessary.	35%
2.	<u><b>Network and Security Management</b></u>  Manages network and security hardware and software, including routers, switches, firewalls and uninterruptible power supplies (UPS). Monitors and maintains CCOHS Internet connections.	20%

3.	<u>IT Procurement</u> Researches, obtains vendor quotes and performs all necessary steps to procure IT related hardware, software and services required for CCOHS.	20%
4.	<u>Software Application Support</u> Provides software application support to all staff as well as occasional hardware support when required. Provides informal training on hardware and software applications when required.	10%
5.	<u>IT Security</u> Contributes to the IT security team (MITS) mandate by performing threat and risk assessments, security awareness training and responding to government requests. Manages security solutions, including firewalls, WAFs and intrusion detection and prevention systems. Manages SSL certificates for servers.	5%
6.	<u>Documentation</u> Documents processes and procedures (e.g. backup server, firewall changes) and any changes to existing systems.	5%
7.	<u>Other</u> Prepares regular reports pertaining to the above and performs other related duties, as required.	5%

**NATURE AND SCOPE OF POSITION**

The position reports directly to the Supervisor, IT Infrastructure. The incumbent is one of multiple positions responsible for systems and network administration. The Systems and Network Administrator is responsible for providing technical support, setup and operational maintenance of computer system hardware and software, as well as technical support for computer applications and communications software. The incumbent works closely with members of the IT Operations and Quality Assurance service unit and other teams, as assigned. The incumbent is expected to participate in the planning of the service unit or team activities, to ensure that they play an active part in achieving the goals without causing work overload or imposing conflicting demands, including deadlines. They must adjust to frequently changing priorities and deadlines and notify the Supervisor, IT Infrastructure and team lead(s) should time constraints or other challenges arise that require resolution. The incumbent is accountable for completing work agreed to and assigned in monthly plans and annual business plans.

**Know-How**

The incumbent is required to have:

- sound knowledge of cloud services such as Amazon AWS, Microsoft Azure, or Google Cloud.
- sound knowledge of multiple operating systems (e.g., Windows 10/11, Windows Server, Linux and MacOS).
- sound knowledge of server virtualization technology (VMware and Veeam).
- strong knowledge of current systems software, protocols, and standards including Active Directory, E-mail, DNS, DHCP, BGP, IPsec, VPNs, VLANs and TCP/IP.

- experience installing, configuring and maintaining server hardware (e.g. RAID, FC, SAN and NAS.)
- a thorough knowledge and understanding of the implications, performance, security, and integration impacts of changes to server and network configurations.
- a working knowledge of one or more scripting languages and tools such as Perl, Python or PowerShell to manage files, processes, and permissions.
- good working knowledge of desktop applications such as Microsoft Office (Word, Excel, Access, Power Point, Outlook), web browsers, Adobe products and a variety of security protection software.
- sound understanding of the procurement process.
- sound knowledge of the ITIL 4 framework and the change control process.

### **Problem-Solving**

The incumbent:

- researches good practices and current trends when implementing or improving systems.
- develops, recommends, and implements new hardware, software and procedures for optimum automation and performance of the various servers.
- considers the effect on CCOHS staff and customers when making configuration changes.
- responds to IT security incidents to minimize the impact, eliminate vulnerabilities, and document the actions taken.
- troubleshoots software and hardware problems in a timely manner. These are often server, network, Internet connection or personal computer problems affecting many staff, all staff, or customers.
- troubleshoots procurement problems and navigates the Shared Services procurement process.

### **Accountability**

The incumbent is accountable for:

- ensuring the availability of servers, network, cloud-based services, Internet connection infrastructure and personal computers, and for developing processes and procedures for ongoing management of this infrastructure.
- ensuring the availability of remote access capabilities for staff.
- ensuring the systems infrastructure meets CCOHS IT security requirements.
- preparing recommendations for technical solutions.
- providing guidance to other members of the team.
- writing the necessary systems documentation to ensure that other administrators can understand and administer the servers, network, and Internet connection.
- producing IT security threat and risk assessments and other reports or feedback as required.
- being available to identify and fix problems occasionally after regular work hours.
- resolving IT security issues in a timely fashion.
- ensuring procurement of proper hardware, software and IT services is cost effective and completed according to scheduled needs.

### **WORKING CONDITIONS**

#### **Physical Effort:**

The employee works at a computer (keyboarding and mousing to read and reply to e-mail, prepare reports, review information, etc.) for most of the workday. The work is interspersed with non-

computer-based activity, such as reading, thinking, proof-reading, photocopying, filing. The employee has some control over the workload and can get up, stretch, and walk on a regular basis. Some stooping and lifting or handling of heavy objects may be required.

**Physical Environment:** The employee works at a desk and/or a computer workstation with a keyboard and a mouse for the majority of the workday. The workstation and desk are ergonomically set up, with a wrist rest, mouse rest, document holder, task lamp, as required. The lighting meets standards and there are adjustable blinds on the windows as required. The building environmental controls meet general office requirements. Some risk of RMI due to intensity and duration of work unless safe work procedures outlined are followed. There is a risk of injury from lifting and using tools. Work is often performed in awkward positions. The server room is noisy and there is frequent exposure to dust and dirt.

**Sensory Attention:** The position requires concentration to compose, enter data, proof-read, quality assure, read routine information, communicate with others via e-mail, search for information and listen to others carefully. The work requires close concentration when installing software, making configuration changes, applying patches and updates, and trouble-shooting problems. There is a need to use senses such as hearing and smell to identify problems such as equipment malfunctions (sometimes in a noisy environment).

**Mental Stress:** There are priorities and deadlines which need to be met on a regular basis. There are interruptions from colleagues, supervisor, or telephone calls. The employee has some control over the pace of work. Work may be repetitious. The position must deal with sometimes angry and frustrated staff having computer problems. There is disruption to lifestyle while being on call to respond to after-hours server or network emergencies. There are frequent interruptions. There are periods of high stress when restarting downed servers, networks or during IT security incidents that affect both internal and external customers.

## **SPECIFICATIONS**

- Post-Secondary Degree or Diploma in Computer Science, Information Systems or related program experience administering computers, servers, and networks.
- Experience with cloud platforms such as AWS, Azure or GCP is required.
- Proficiency in using and administering Linux and Windows server operating systems.
- Experience with other operating systems including Windows 10/11, Linux and MacOS.
- Five years experience with servers, networks and web standards and protocols such as Active Directory, E-mail, DNS, DHCP, BGP, IPsec, VPNs, VLANs and TCP/IP, HTTP/S and HTML.
- Must have experience installing, configuring, and maintaining server hardware including RAID, FC, SAN, and NAS.

- Five years experience with scripting languages such as Perl, Python or PowerShell.
- Experience with a relational database management system such as MySQL is beneficial.
- Strong problem-solving, troubleshooting abilities and analytical skills are required.
- Strong client service focus.
- Ability to work independently with minimal supervision and as part of a team.
- Ability to analyze and troubleshoot network, server, and personal computer problems, and develop effective solutions.
- Ability to operate under deadlines and manage competing requests from multiple program areas.
- Experience with system testing concepts would be an asset.
- Good interpersonal and communications (oral and written) skills.
- Experience with the ITIL 4 framework and change control process.