

# CITY OF HAMILTON

## **CORPORATE SERVICES DEPARTMENT (INFORMATION TECHNOLOGY DIVISION – INFRASTRUCTURE & OPERATIONS – LOCATION – 55 YORK BLVD., 6<sup>th</sup> FLOOR)**

### **ENTERPRISE NETWORK INFRASTRUCTURE SPECIALIST**

#### **SUMMARY OF DUTIES**

Reporting to the Manager, Infrastructure & Operations the Enterprise Network Infrastructure Specialist is responsible for providing expertise and leadership in strategy, design, validation and support on existing, new or updated Network infrastructure environments and services. This role is responsible for providing technical guidance and expertise with a focus on sustainability, continuous improvement, and long-term planning of network infrastructure to meet the organizations current and future requirements in a cost-conscious and sustainable manner.

#### **GENERAL DUTIES**

##### **IT Infrastructure Strategy and Design**

Designs, implements, and provides on-going support of enterprise-wide infrastructure architecture(s) and data/network/security systems integrations.

Provides planning, input, technical direction and consultation for network, including: data centers, disaster recovery, wide area and local area network, wireless, server infrastructure, storage, backup.

Evaluates existing conditions; determines or identifies technical requirements, evaluates alternatives for capacity planning for continuous improvement.

Coordinates and leads the development of business case proposals for IT Infrastructure initiatives in conjunction with input y other IT peers and departments.

Provides key concepts and expertise towards the development of long-term strategies to ensure timeliness, compatibility, and integration with overall IT back-end infrastructure ensuring software compatibility and sustainability.

Acts as technical lead and participates in committees and work groups across areas and departments to address specific projects and issues.

Provides escalated IT Infrastructure expertise by analyzing, troubleshooting network and technology infrastructure issues and identify alternate solutions and recommendations for corrective measures.

Assists Network Analysts and support staff with complex troubleshooting.

##### **Disaster Recovery & Business Continuity and Design and Solutioning**

Ensures the availability of all critical corporate infrastructure technologies and highly sensitive data such as Financial Systems, Microsoft Messaging, mobile device management services and all externally public facing systems hosted at and for the City.

Develops the architectural design and implementation of complex enterprise disaster recovery plans in accordance with established recovery time objectives and recovery point objectives.

Identifies vulnerable areas within the City's critical infrastructure functionalities and provide/execute on those recommendations.

Recommends and implements disaster avoidance and business impact reduction strategies.

Directs and coordinates staff and other departmental key staff for testing of disaster recovery strategies.

**Network Administration Design & Strategy**

Evaluates, designs and specifies, new solutions for the City's technology infrastructure including, but not limited to, Networking, Data Centre, and security technologies.

Develops test plans for new technology architecture.

Champions network design for the City's converged WAN/LAN networks, including datacentres and develops the guiding principles and framework which establishes network and integration standards, and continuous improvement methods.

Works with the Security & Technology section in IT to design network solutions for the City or external stakeholders, ensuring the integrity, security, and safeguarding of data is completed by working with the Security & Technology best practices to ensure availability and confidentiality of data, to mitigate data leakage risks, or exposure of the City's network and server systems internally or externally.

Analyzes, designs, makes recommendations, and works with network analysts to maintain and administer the network infrastructure and application components.

Designs solutions with data and system availability in mind, to ensure that adequate network and internet bandwidth is available. Ensures that there will not be any restrictions to daily operations through any traffic bottlenecks within the City of Hamilton's network infrastructure by instituting redundant, failover, and high-availability solutions where required.

Accountable for the network design, evaluation, integration, and sustainment of all internal and public facing presence of the City of Hamilton's organizational infrastructure.

Tier 3 level support for the operability and high availability of City I.T infrastructure 24x7x365 of all network related services and applications.

Leads the research on emerging products, services, protocols, and standards in support of contingency planning and development efforts and recommends technologies that will increase cost effectiveness, systems flexibility, integrate seamlessly into the enterprise environment.

Works with IT teams, business partners, external parties and stakeholders to understand customer needs to ensure new network requirements are properly understood, scoped, and architected.

Capacity planning and continuous improvement; monitor consumption patterns/trends in the City's technology infrastructure, to recommended improvements for reliability and capacity while reducing or maintaining manual administration and cost.

Stays current with industry best practices and changes or advances.

Works in accordance with the City of Hamilton's Corporate and IT policies, processes and procedures; contributes to the creation and sustainment of technology frameworks and architectures and tools.

Performs other duties as assigned, which are directly related to the major responsibilities of the job.

**QUALIFICATIONS**

1. University degree in Information Technology, Computer Science, related discipline or equivalent combination of education and experience. Post secondary courses in computer forensics and security, cloud architecture and security would be an asset.

2. Cisco Certified Networking Professional (CCIE – Routing and Switching) Required.
3. ITIL Best Practice certification.
4. 10 years' experience in Information Systems and Technology in a medium to large sized data center and network security and design environment.
5. Microsoft products, such as Windows Operating Systems, Messaging and Collaboration, Office Productivity Suites, Security Product Suites, Network appliances and technologies i.e. CISCO, VMWare Virtual Infrastructure such as ESXi, ESX, and VDI, Enterprise wireless products such as Cisco controllers, Access Points and monitoring solutions, and Enterprise storage and IaaS/PaaS/SaaS solutions (Fibre attached SAN's & Office 365).
6. Progressive responsible experience in disaster recovery planning.
7. Expert knowledge of IP communications systems/networks; Protocols including BGP and OSPF; Tunnelling Protocols such as IPSEC; High Availability Protocols such as VRRP, HRSP, LACP and Virtualization Technologies including MPLS and VRF.
8. In-depth knowledge of data centers and networking environments, with business continuity and disaster recovery planning.
9. Demonstrated advanced knowledge of firewall and load balancer technologies, Routing & Switching Technologies, Quality of Service and Wi-Fi communications.
10. Demonstrated experience defining system requirements and preparing specifications and architectural designs for the integration, implementation and support of communications technologies into the existing network infrastructure
11. Superior knowledge of MS-Visio with the ability to create large complex multi-layered Layer 2 & 3 diagrams and network and application/technology flow diagrams.
12. Demonstrated organizational skills along with excellent documentation and report writing ability.
13. Ability to be flexible with work schedules for updates and installations of hardware/software products.
14. Well developed communication skills. Demonstrated ability to communicate with internal, external staff.

**THE INCUMBENT SHALL COMPLY WITH ALL HEALTH AND SAFETY POLICIES AND PRACTICES FOR THIS POSITION AND THE WORKPLACE.**

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