



## IDENTIFICATION

Department	Position Title	
Infrastructure	Server Infrastructure Analyst	
Position Number	Community	Division/Region
33-00343	Yellowknife	Technology Service Centre

## PURPOSE OF THE POSITION

The Server Infrastructure Analyst participates in the performance, delivery, implementation, management, and design of the technically complex server and storage system infrastructure. The position also provides advanced critical support services by monitoring and managing this infrastructure to meet the demanding performance requirements of all Government of Northwest Territories (GNWT) departments as well as some of its boards and agencies and provide all employees with secure, robust, and reliable access to all systems, data, and business applications they require to work in an efficient and effective manner.

## SCOPE

Located in Yellowknife and reporting to the Server Infrastructure Team Lead, the Server Infrastructure Analyst participates in the analysis, design, planning, maintenance, administration, improvement, and management of all aspects of the server hosting and storage system infrastructure and is a key resource for server and storage system infrastructure administration and troubleshooting.

The position is responsible for taking actions related to the performance, implementation and maintenance of all server hosting, storage infrastructure and its related hardware and software. The Server Infrastructure Analyst must have advanced level understanding of and ability to work within multiple technology domains including server security, server virtualization, storage systems, emerging cloud hosted technology and services, cellular device security, Microsoft Active Directory, Microsoft domain and network protocols and disaster recovery processes. The position supports the entire GNWT server hosting and storage system infrastructure and the associated hardware and software, which is a complex hybrid environment comprised of multiple data centre locations distributed across all communities in the NWT and use a variety of vendor

products and systems, which must work as a homogeneous unit. In this role, the position is often required to participate in high pressure situations and complex implementations.

The Technology Service Centre (TSC) provides leadership and expertise to all departments of the GNWT, as well as some boards and agencies, in all regions and all 33 communities across the NWT, on matters related to the government wide area data network, servers, storage, data center facilities, all government information technology infrastructure, communication systems and their technical support in order that employees have continual access to the workplace functions they require to do their jobs in an efficient and effective manner. Services are provided in accordance with a framework of operating procedures and guidelines established within the TSC, and with standards developed in conjunction with the Office of the Chief Information Officer (OCIO) and GNWT standards committees.

The Division promotes the efficient and effective use of government technology resources through education and outreach and collaborates with a variety of internal and external partners to maximize the benefits of investments made by the GNWT. The specific technologies, practices and approaches employed in delivering these services are evolving at a rapid pace and the TSC must monitor advances in technology and evaluate options routinely to improve services and provide the policy framework to support the ongoing requirements. Furthermore, as a fee for service model utilizing service level agreements with client departments, the TSC faces significant pressure to keep systems operational, secure, and technologically advanced while also cost effective to successfully meet the objectives of the GNWT departments, boards, and agencies it serves.

Server and storage services are used 24 hours a day, 365 days a year to store and host critical data that impacts on all areas of the GNWT. Server and storage services are delivered to approximately 6,100 employees of the GNWT and its health authorities, education boards, agencies, and schools (clients). These services include, but are not limited to application and website hosting, email services, storage hosting, backup and disaster recovery services and the delivery of program specific applications. System interruptions, issues and outages can have a highly detrimental, and possibility catastrophic, impact on the ability of GNWT departments, boards, and agencies to deliver programs and services.

## **RESPONSIBILITIES**

- 1. Provide and support the production and test server environments including storage system infrastructure support, virtualization, server security, cloud hosted technologies, disaster recovery and application presentation that host all GNWT data and applications in a secure, efficient, and effective manner.**
  - Test, implement, and support the complex server hosting and storage systems infrastructure for all GNWT hardware and software distributed across multiple data centers and in communities across the NWT.



- Plan and design routine server and storage infrastructure deployments, testing and production rollout process.
- Assist with third tier of troubleshooting for technical problems, in collaboration with Infrastructure Services and End User Support Services staff, as well as GNWT IT staff and third-party contractors as required.
- Provide technical server and storage support including diagnosis, repair, set-up, and configuration.
- Assist with the implementation of non-standard solutions and workarounds as required to mitigate the impact of outages, and where possible to prevent them.
- Participate as part of project teams and supports the delivery of server and storage system projects to complete projects on time, on budget, to specified quality standards and within agreed upon scope.
- Follow priorities for problem resolution and escalates problems when required.
- Monitor and responds to disaster recovery and business continuity testing to meet critical business operations.
- Monitor server and storage system logs in order to report on server traffic, and storage usage patterns.

**2. Contribute to and perform maintenance tasks to support security administration procedures that secure the GNWT server and storage systems for all staff of the GNWT and its boards and agencies, which are accessed by GNWT and non-GNWT users.**

- Apply standards for the application of server and storage security controls, maintenance, access, and security procedures.
- Implement the provision of controlled data access to individuals and organizations outside of the GNWT network, in a way that does not compromise the integrity and security of GNWT data repositories within the network.
- Monitor and maintain the security processes and protocols, which provides secure application access to data systems, email access, and remote application access.
- Keep abreast of technological advances in servers and storage management and contribute to decisions about how best to apply these to the GNWT infrastructure, to enhance security, performance, stability, and supportability.
- Provide advanced level knowledge related to the maintenance of the server and storage systems.
- Assist with security breaches.
- Perform standard and non-standard security administration tasks and resolve security administration issues.
- Partner with OCIO, TSC colleagues and contractors to implement and support network security procedures.



**3. Follow the procedures, standards and guidelines and maintains documentation for server and storage system architecture, administration, security, configuration, and hardware.**

- Understand and follows processes implemented applying the Information Technology Infrastructure Library (ITIL) of industry best practices to an IT infrastructure and support organization.
- Participate in incident management, change management, configuration management, release management, and problem management processes.
- Investigate problems and collect performance statistics and create reports using server and storage management system software, tools and knowledge of Server and Storage system architecture.
- Maintain complete documentation for the TSC server and storage system infrastructure.
- Provide plain-English explanations and guidance to staff in other areas of the TSC, and to GNWT staff.

**WORKING CONDITIONS**

**Physical Demands**

Consistent with the typical GNWT office environment while working in the office. Heavy lifting as well as crawling in awkward spaces are required as part of implementation and maintenance activities.

**Environmental Conditions**

Consistent with the typical GNWT office environment while working in the office. On average, 20-30% of the incumbent's work time is spent in the data centre. When working in the data centre, the incumbent is exposed to background noise and to temperatures that are cooler than the normal office environment.

**Sensory Demands**

The incumbent typically spends long periods of time looking at computer screens during work hours and will often be required to use the combined senses of sight and touch while installing hardware components into servers. This combined use of senses may cause moderate levels of sensory demands on the incumbent for short periods of time.

**Mental Demands**

The incumbent is required to address service incidents that may heavily impact the operation of the GNWT, and therefore may require rapid response and resumption of service. These incidents may occur any time, 24 hours a day, 365 days a year.



Mental fatigue is common because of the heavy workload, balancing competing priorities, sorting through conflicting information, the periodic need for intense analytical work and the pressures of complex projects often impacted by tight deadlines. Unexpected demands, competing demands and ambiguity frequently add to the stress and mental fatigue.

Occasional duty travel is required to perform the duties of this job.

The incumbent may be required to be on-call for extended periods or on a rotational basis 24/7 to fulfill the above requirements.

### **KNOWLEDGE, SKILLS, AND ABILITIES**

- Technical knowledge that enables the incumbent to participate effectively in the troubleshooting of problems involving hardware and software, including performance issues; skilled in troubleshooting and diagnosing complex server and storage system problems.
- Technical knowledge of technologies found in either Windows or Unix based servers and their tuning, securing and optimization.
- Technical knowledge of Microsoft Active Directory and server software technologies and their tuning, securing and optimization.
- Technical knowledge of security controls as they relate to servers and storage, and the ability to recognize and mitigate risk.
- Technical knowledge of risk analysis, disaster recovery, planning and an ability to design and lead effective event simulations.
- Technical knowledge of capacity planning as it relates to servers, storage and supporting infrastructure.
- Technical knowledge of server and storage communications principles, hardware, software, and best practices.
- Knowledge of and ability to implement processes in accordance with the Information Technology Infrastructure Library (ITIL).
- Ability to apply incident management, change management, configuration management, release management and problem management practices.
- Knowledge of Project Management practices and how to apply them effectively.
- Communication and interpersonal skills (oral, written and presentation skills) and an ability to explain technical issues using appropriate terminology based on audience.
- Ability to effectively facilitate collaboration between stakeholders, IT professional and business units to design solutions that address their business needs.
- Ability to adapt tactics to fit different situations, or clients.
- Proficiency in asking a series of probing questions to get at the root of a situation or problem, below the surface of issues presented.
- Proficiency in breaking complex technical problems into pieces and link the pieces together in logical order (i.e., A leads to B).



- Proven ability to use knowledge of IT theory or of past trends or situations to look at new problems; including applying and modifying complex learned concepts or methods appropriately.
- Ability to participate willingly and support team decisions and do an equitable share of the work; including sharing all relevant and useful information obtained with the team.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion, and cultural awareness, as well as safety and sensitivity approaches in the workplace.

**Typically, the above qualifications would be attained by:**

A Degree in a related Computer Science or Information Systems program and one year of PC, server, and storage system support and administration experience.

Equivalent combinations of education and experience will be considered.

**ADDITIONAL REQUIREMENTS**

A valid Canadian Driver's License, equivalent to NWT Class 5 or better.

**Position Security** (check one)

- ☐ No criminal records check required
- ☒ Position of Trust – criminal records check required
- ☐ Highly sensitive position – requires verification of identity and a criminal records check

**French language** (check one if applicable)

- ☐ French required (must identify required level below)

Level required for this Designated Position is:

ORAL EXPRESSION AND COMPREHENSION

Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐

READING COMPREHENSION:

Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐

WRITING SKILLS:

Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐

- ☐ French preferred

**Indigenous language:** Select language

- ☒ Required
- ☐ Preferred