SYSTEMS INTEGRATOR 1

Job ID: 25072
Job Category: Information & Technology
Division & Section: Toronto Water, TW Customer & Technical Support
Work Location: Various (See below)
Job Type & Duration: Full-time, Permanent Vacancy
Hourly Rate and Wage Grade: $46.84 - $51.33, TF0204, wage grade 15.
Shift Information: Monday to Friday, 35 hours per week
Qualified List: Candidate list
Affiliation: L79 Full-time
Number of Positions Open: 1
Posting Period: 04-08-2022 to 01-09-2022

Work Location:

Though the base work location will be the Kipling Yard (435 Kipling Ave), the successful incumbent will be required to travel to other Toronto Water sites, including Ashbridges Bay (9 Leslie Street), High Level Pumping Station (235 Cottingham Street), etc.

Job Description

As a member of Toronto Water's Customer & Technical Support Team, the Systems Integrator 1 in the PCS unit is responsible for the implementation of various complex Automation & Programming Services, performing SCADA and PLC programming internal projects, and providing specialized technical support related to complex process control systems involving a high level of process automation in the water plant, wastewater treatment plant, and distribution/collection environment.

Reporting to the Senior System Integrator, the incumbent will provide expertise and support related to SCADA, PLC, Local Area Networks (LAN), Analysis & Design, Programming & Testing, Training & Documentation, Implementation & Rollout, and maintenance/enhancements of Toronto Water's applications and computing environment.

Major Responsibilities:

- Provides input to Data Management teams on transformation of clients' business requirements by participating in, and carrying out, varied assignments related to Process Control Systems and process automation within a broad field of Municipal infrastructure design and construction.
- Assesses, analyzes, evaluates and recommends process & policy alternatives by overseeing the integration of complex technical and process equipment installations, testing and acceptance/approvals, including guidance of external resources.
- Redesigns business principles, processes, policies and standards by recommending best practices and improvements to current processes (i.e. planning, designing, implementing, and maintaining PLC, SCADA, OIT and other computerized equipment in a highly complex technology environment utilizing a variety of automation and control platforms and products).
- Conducts, or leads team in the delivery of, projects related to SCADA and PLC programming services (i.e. leading technical project teams comprised of members from other Toronto Water sections/units and/or other divisions and external service providers; provides specialized design services, technical advice and expertise to support the units of the Division/Cluster/Corporation).
- Conducts walk-through of deliverables to identify potential problems (i.e. conducts testing and implementation of design concepts to meet functional requirements, including participation as the PCS lead during Factory Acceptance Testing (FAT) & Site Acceptance Testing (SAT) of control systems).
- Liaises with staff in development of test strategy, test cases and test scripts for system,

performance, usability and acceptance testing of system solutions developed.

- Liaises and coordinates with internal and external groups on accomplishment of deliverables as well as divisional and corporate support sections and other facility representatives like Management and Operational/Maintenance staff.
- Leads team to draft implementation and rollout strategies and plans.
- Prepares findings and "Lessons Learned" from post-implementation project reviews.
- Identifies risks and prepares action plans to mitigate.
- Establishes and maintains business relationships with clients to discuss/assess clients' needs.
- Recommends improvements to current methodology, process, standards, and policies by investigating, evaluating, and providing technical expertise for the analysis and evaluation of existing and proposed PCS modifications and SCADA problems with varying complexity, and ensures compliance with PCS guidelines.
- Prepares and presents status reports, including issue papers, briefing notes, staff reports and presentations, to inform and update senior management, peers, municipal partners and/or external parties on technology trends and the effective use of business/technology solutions and infrastructure management.
- Prepares training material and documentation for use by clients and staff.

Key Qualifications:

Your application must describe your qualifications as they relate to:

1. College diploma/degree in Electrical or Electronic Engineering, or Computer Science, or equivalent combination of education and experience.
2. Considerable experience in the application of the principles and practices of instrumentation, process control, PLC and SCADA systems as applied to municipal water treatment, and wastewater treatment or collection/distribution/collection systems.
3. Considerable experience in planning, designing and implementing PLC, SCADA and HMI in a highly complex technology environment utilizing iFix, Proficy Machine Edition, RS Logix, Visual Basic, Kepware OPC, SimMagic and Pics-Pro.
4. Considerable experience programming with Emerson, formerly GE Automation platform (RX3i), Allen-Bradley (PLC5, SLC, CLX), programmable controllers with associated controllers' remote I/O, troubleshooting and fault finding.
5. Considerable experience with Industrial control networks, communication protocols (ASCII, RS232, RS485/422, Ethernet/IP, Modbus, DNP3, ProfiNet, ProfiBus, HART) and wireless communication (WirelessHART, UHF/VHF radio).
6. Possession of a valid Province of Ontario Class "G" Driver's Licence and daily access to a vehicle to travel to various work locations and construction sites, and the ability to obtain a City Operator's Permit.

Must also have:

- Ability to provide technical support in the maintenance and service of the following applications and servers: iFIX SCADA, iTerminal server and iHistorian.
- Ability to interpret engineering drawings, FAT/SAT testing documentation, equipment/instrumentation layouts/schematics, specifications, process diagrams, process control narratives, and programming ladder/function block logic.
- Ability to assist management to resolve more complex automation performance issues, as well as troubleshoot and provide guidance to facility staff in investigations related to PCS usage and performance.
- Ability to manage, and provide leadership for, assigned projects and tasks from inception to completion, and ensure effective teamwork, communication, high standards of work quality, organizational performance, documentation and continuous learning.
- Expert knowledge in computerized software systems, such as programmable logic controllers (PLC), Supervisory Control and Data Acquisition (iFix, iHistorian), Database (SQL, Oracle, MS Access) and other related technology for support and analytical purposes.
- Strong knowledge in computerized systems, such as Windows 10, Windows Server 2016, Active Directory and Cyber Security.

- Ability to coordinate related work between various internal & external stakeholders and staff for investigations, modifications and improvements of the PLC and HMI systems for the facility.
- Strong knowledge to establish guidelines, standards and processes, devise new approaches, apply existing criteria in innovative ways and draw conclusions from comparative situations, and ensure that the PCS performance objectives comply with the established Toronto Water 'Goals of Automation'.
- Ability to provide input into, and support the development/implementation of, technical standards and policies associated with management and stewardship of PCS through routine review and audit reports, as well as track procedures and policy compliance associated with PCS deliverables and contractual documentation.
- Ability in the application of design principles and implementation processes related to process control systems throughout the preliminary design, detailed design, and construction/commissioning phases.
- Knowledge of the maintenance, repair, and troubleshooting of programmable logic controllers, remote terminal units and data communications.
- Strong interpersonal skills with the ability to establish effective working relationships with all stakeholders, employees, client departments, outside agencies or other levels of government.
- Ability to manage multiple assignments and conflicting priorities.
- Ability to communicate effectively, both verbally and in writing, at all organizational levels.
- In-depth knowledge of current and emerging computing, communication and Internet-related technologies, IT concepts, best practices, methodology, and IT-oriented techniques, and business requirements.
- Strong commitment to customer service, performance, quality and continuous improvement, with proven skills to be able to work with clients during construction and commissioning stages to ensure quality assurance procedures and quality control measures are in compliance with the management of PCS design and construction activities.
- Knowledge of water-related provincial and federal legislation, an asset.
- Ability to work evenings, overnights, weekends and holidays, travel to off-site locations, and participate in Standby Rotation.

Note: All City of Toronto employees are required to be fully vaccinated as a condition of hire in accordance with the City's Mandatory Vaccination Policy < https://www.toronto.ca/city-government/accountability-operations-customer-service/city-administration/corporate-policies/people-equity-policies/covid-19-mandatory-vaccination-policy/ >.

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How to Apply:

For more information on this and other opportunities with the City of Toronto, visit us online at https://jobs.toronto.ca/jobsatcity/. To apply online, submit your resume, quoting **Job ID 25072,** by **Thursday, September 1, 2022.**

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Accommodation

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Should you require Code-protected accommodation through any stage of the recruitment process, please make them known when contacted and we will work with you to meet your needs. Disability-related accommodation during the **application process** is available upon request. Learn more about the City's Hiring Policies and Accommodation Process < https://jobs.toronto.ca/jobsatcity/content/Hiring-Policies-and-Statements/?locale=en_US >.