McMaster University

Job Description
(For Positions in CAW Local 555, Unit 1)

Job descriptions do not include every duty that an individual in a position performs. They are intended to be representative and characteristic of the duties required and the level of work performed. Depending upon the size of the department or unit and its functional activities, incumbents who fall into this category may perform all of the duties listed below or, in the case of large departments or units, may be assigned to designated specialized functions.

JD #:	**JD00635**	Pay Grade:	**10**
JD Title:	**Senior Systems Administrator**	JD FTE Hours:	**35**
Job Family:	**IT**		

General Description

The Senior Systems Administrator acts as a technical and consulting resource for complex issues related to various University departments and units with respect to the implementation and maintenance of information technology systems. Supports the University's academic and administration departments by acting in a technical capacity in all phases of the Project Life Cycle for small to medium projects and components of large projects, including post-production support and ongoing maintenance. Continuously gains an understanding of the University's operations and processes and how systems are used in support of those operations. Works under general direction within a clear framework of accountability and exercises substantial personal responsibility and accountability to deliver results to the University.

Representative Duties & Responsibilities

- Provide design and support for technology in server and related environments, data network infrastructure and related environments, datacenter technology and facilities, storage area network and other storage related environments, voice network infrastructure and related environments, and information security infrastructure and other related environments.
- Critically evaluate information gathered from multiple sources, reconcile conflicts, decompose high-level information into details, abstract up from low-level information to a general understanding, and distinguish user requests from the underlying true needs.
- Elicit requirements using interviews, document analysis, requirement workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, and task and workflow analysis.
- Perform advanced levels of analysis, problem solving and research skills to formulate solutions to complex business needs.
- Conduct gap analyses.
- Develop strategies for implementing new services and upgrades on production systems.
- Troubleshoot computer system issues that may require an end-to-end evaluation of University wide systems often spanning multiple heterogeneous hosts and locations across the University and with external service providers.
- Ensure the availability and performance of the current production storage, information processing, and computing environment in assigned and related areas of the organization.
- Test system architecture in order to minimize risks to the production systems.
- Investigate, evaluate, compare, and demonstrate new hardware and software products, and new computing techniques which could enhance the University's computing, information processing, and network environment.
- Undertake study and pilot projects to assess and select commercial technology alternatives.
- Provide technical assistance to individual user groups, user support, and operational staff in the introduction and development of specialized systems and services.
- Ensure individuals conform to organizational information processing, use of network, and computing standards through the proper publication and awareness of policies.
- Plan and coordinate the technology refresh for large and complex interconnected systems.
- Contribute to the development of cost and time estimates for the technical architecture components of project implementation.
- Deliver workshops and demonstrate new technologies to campus staff as systems are being implemented.
- Prepare and present training for user support and operational staff through technical seminars and documentation.
- Prepare procedures for restoring systems to full operation after hardware and software component failures on both

McMaster University

Representative Duties & Responsibilities

production and test systems.

- Prepare contingency plans for recovering services and operations after incidents including, but not limited to, power blackouts, water damage, or structural building failures and contribute to the planning and development of disaster recovery scenarios.
- Undertake projects such as performance monitoring and capacity planning to monitor the overall reliability and effectiveness of the computing systems and information processing architecture including storage area networks.
- Liaise with computer vendors, other institutions, and associated computer user groups as a means to maintain communication between all parties involved in technical projects and day-to-day operations.
- Design, implement, and document support processes, procedures, and mechanisms that inter-connect heterogeneous systems in support of the integration of processes and data flow.
- Gather and compile information and create reports and graphs for capacity planning, and performance metrics.
- Prepare technical specifications and requests for quotes from suppliers and requests for proposals.
- Participate in negotiations with suppliers to discover options and acquire the most cost effective solutions for technology requirements.
- Utilize the appropriate control tools to coordinate small and medium size projects according to Project Management Office methodologies.
- Develop success criteria and risk assessments for small to medium size projects and changes.
- Develop, implement, and document best practices to align with departmental and University strategies and processes.
- Work independently with users to define concepts.
- Ensure that projects meet specified functionality requirements.
- Prepare and review recommendations and other project initiation documents.
- Document system functionality, particularly related to new enhancements.
- Develop and maintain information technology process flow, methodology, and control documentation.
- Assist with the development of project proposals and estimates.
- Resolve problems in the test, production implementation, and post-implementation phases in coordination with other technical and business groups.
- Liaise between the technology and support teams.
- Communicate project, issue, and system status to others.
- Communicate testing results to other stakeholders.
- Facilitate effective dialog between user community and technical staff.
- Interact with and exchange information with colleagues.
- Follow a test script and document defects.
- Work with others to prioritize and schedule issues resolution.
- Plan, schedule, and monitor own work within short time horizons.
- Organize individual time, work and resources to accomplish objectives in the most effective and efficient way.
- Understand and use appropriate methods, tools, and applications to complete work tasks.
- Demonstrate a rational and organized approach to work and identify development opportunities.
- Absorb technical information when it is presented systematically and apply it effectively.
- Use measurement methods to monitor progress toward goal attainment, tenaciously working to meet or exceed those goals, while deriving satisfaction from the process of goal achievement and continuous improvement.
- Ensure that the internal and external customer perspective is a driving force behind decisions and activities.
- Follow service practices that meet customers' and University needs.
- Interact with others in a way that gives them confidence in one's intentions and those of the University.
- Work collaboratively with others to achieve departmental and institutional goals. Actively participate as a member of a team to move the team toward the completion of goals.
- Perform a range of varied work activities in a variety of structured environments.
- Successfully engage in multiple initiatives simultaneously.
- Apply and enforce department change control policies and procedures.
- Read and understand a complex project plan and develop simple project plans.
- Remain current with relevant development and project methodologies.
- Remain current with security policies and procedures and work with System Administrators to implement security changes.
- Remain current with the different levels of testing and develop simple use cases and test scripts.

Supervision

- Provide direction to others in how to carry out work tasks.

Qualifications

- Bachelor's degree in Computer Science, Business, or a related field of study.
- Requires 4 years of relevant experience.

Effort

Physical Effort:
- A typical work day consists of greater than 3.5 hours of low physical effort for activities such as:
  - Intermittent periods of keyboarding to process documents, enter data into databases, and maintain accurate records.

- Elements of moderate physical effort are not a regular feature of this job.

- Elements of high physical effort are not a regular feature of this job.

Mental Effort:
- A typical work day occasionally requires routine mental effort for activities such as:
  - Collecting routine information, word processing routine documents such as correspondence and reports, and inputting data in databases and spreadsheets.

- A typical work day consists of up to 2 hours of moderate mental effort for activities such as:
  - Ensuring the availability and performance of the current production storage, information processing, and computing environment in assigned and related areas of the organization.
  - Testing system architecture in order to minimize risks to the production systems.
  - Investigating, evaluating, comparing, and demonstrating new hardware and software products, and new computing techniques which could enhance the University's computing, information processing, and network environment.
  - Undertaking study and pilot projects to assess and select commercial technology alternatives.

- A typical work day consists of greater than 3.5 hours of high mental effort for activities such as:
  - Developing strategies for implementing new services and upgrades on production systems.
  - Providing design and support for technology in a variety of environments.
  - Designing support processes, procedures, and mechanisms that inter-connect heterogeneous systems in support of the integration of processes and data flow.
  - Critically evaluating information gathered from multiple sources, reconciling conflicts, decomposing high-level information into details, abstracting up from low-level information to a general understanding, and distinguishing user requests from the underlying true needs.

Working Conditions

Physical Environment:
- There are no adverse physical environment conditions inherent to the job.

Psychological Environment:
- Occasionally interacts with individuals who may be rude or upset.
- Frequently deals with multiple projects and simultaneous deadlines.

Health & Safety:
- Risk to the incumbent is no higher than for the general population.

Job Description Rating Sheet

(For Positions in CAW Local 555, Unit 1)

JD #:	**JD00635**	Pay Grade:	**10**
JD Title:	**Senior Systems Administrator**	Total Points:	**612**
Job Family:	**IT**		

Factor	Subfactor	Level Rating	Points
Skill	1. Applied Reasoning and Analytical Skills	**5.0**	105
	2. Breadth of Knowledge	**2.0**	13
	3. Adaptation to Change/Updating of Learning	**2.5**	17
	4. Interpersonal Skill	**4.0**	54
	5. Education and Experience	**E3**	100
	6. Dexterity and Coordination	**2.0**	12
Effort	7. Physical Effort	**1.0**	3
	8. Mental Effort	**5.0**	100
Responsibility	9. Planning and Coordination	**4.0**	64
	10. Responsibility for Others	**2.0**	33
	11. Accountability for Decisions Actions Affecting People, Assets, and Information	**4.0**	93
Working Conditions	12. Physical Environment	**1.0**	3
	13. Psychological Environment	**2.0**	10
	14. Health and Safety	**1.0**	5

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