DENVER
THE MILE HIGH CITY

Office of Human Resources
IT Systems Architect - LI3244

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General Statement of Duties

Performs full performance information technology work in the planning, designing, developing, and monitoring of information systems (specializing in Windows, UNIX, Security, Telecommunications, Data Network, and/or Storage Area Network systems) utilized within an agency or throughout the city.

Distinguishing Characteristics

This class is distinguished from the Senior Information Technology System Administrator because the primary duties of this position are more operational in nature. Specifically, the Senior IT System Administrator is responsible for developing and maintaining information systems and updates. This class is also distinguished from the Senior Information Technology System Analyst because the primary duties of this position focus on analyzing, refining, and documenting the business requirements of clients. The IT System Architect focuses more on the planning, designing, and implementation of information systems and updates. In addition, the Information Technology System Architect is responsible for developing the processes and procedures for the integration and maintenance of new systems with existing information systems.

This class is distinguished from the Information Technology Project Manager because the primary duties of this position focus more on organizing, administering, and managing one or more information technology projects. While project management duties are performed by the IT System Architect, these duties are not the position's main focus. Similarly, this class is distinguished from the Information Technology Supervisor since the primary duties of this position involve formal supervisory responsibilities over IT professional incumbents. The IT System Architect does not perform any supervisory responsibilities.

Additionally, the IT System Architect possesses knowledge, skills, and abilities in highly specialized areas (such as Windows, UNIX, Security, Telecommunications, Data Network, and/or Storage Area Network), which provides strong support for the planning, designing, and developing functions performed by the position.

Essential Duties

Plans, designs, and implements citywide information systems including: operating systems, software, and hardware; plans, designs, and implements information systems for an agency on a project basis.

Researches and evaluates new technological advances in the external technology marketplace for the following:

- To assess current practices for compliance with the city's information systems requirements,
- To anticipate the city's future information system needs,
- To develop solutions to address current and future information system needs, and
- To create process improvements and controls.

Works closely with customers and colleagues to identify opportunities to utilize information systems to:

- Improve business processes,
- Promote the strategic use of information, and
- Enable seamless access to information.

Analyzes budget implications and technical requirements associated with implementing new system technologies or upgrading existing system technologies.

Works with customers to assess and make recommendations on:

• Information system needs and requirements,
• Impacts on the budget associated with implementing new system technologies or upgrading existing system technologies, and
• Possible alternatives to meet information system needs.

Coordinates disaster recovery plans which include: designing, testing, and maintaining systems protocols.

Designs and builds prototypes and working models of complex and/or new elements of an information system then directs colleagues with the development, execution, and review of test plans and results.
Trains colleagues on new information system technologies and requirements related to administration and operations.

Coordinates monitoring and maintenance of information systems, including:

• Tracking errors and data movements,
• Configuring software and hardware,
• Maintaining optimum system capacity levels,
• Developing dependency models to be used in risk management, and
• Maintaining consistent system standards agency/citywide.

Performs and documents system back-up and recovery or directs others to do so.

Writes or modifies software programs including analysis, writing specifications and code, program installation and documentation for use with multi-application, multi-user database systems.

Coordinates and monitors the troubleshooting of information systems on daily basis.

Coordinates with vendors the documentation and application of solutions to information system problems.

Develops and maintains a problem reporting system that includes: establishing a communication plan to alert users of the problem and monitoring the resolution of the problem.

Assists in the resolution of critical information system problems and complaints.

By position, may coordinate work activities and assign duties on a project basis.

Performs other related duties as assigned.

Employees may be re-deployed to work in other capacities in their own agencies or in other City agencies to support core functions of the City during a City-wide emergency declared by the Mayor.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

Competencies

Decision Making – Specifies goals and obstacles to achieving those goals, generates alternatives, considers risks, and evaluates and chooses the best alternative in order to make a determination, draw conclusions, or solve a problem.

Customer Service - Interacts with customers in a friendly and professional manner, works to resolve issues quickly and effectively, and is knowledgeable about products and services.

Creative Thinking – Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.

Interpersonal Skills – Shows understanding, friendliness, courtesy, tact, empathy, cooperation, concern, and politeness to others and relates well to different people from varied backgrounds and different situations.

Planning and Evaluating – Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Technical Competence – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technical Problem Solving - Troubleshoots, diagnoses, analyzes, and identifies system malfunctions to determine the source and cause of the problem.

Knowledge & Skills

Knowledge of developments and new applications of information technology (hardware, software, telecommunications), emerging technologies and their applications to business processes, and applications and implementation of information systems to meet organizational requirements.

Knowledge of enterprise architecture principles, methods, and techniques.

Knowledge of the principles, methods, and techniques of IT project planning, management, monitoring, and evaluation.

Knowledge of current information systems trends and technologies.

Knowledge of data processing sufficient to be able to review program specification, design programs and write or modify code.

Knowledge of data processing hardware, monitors, operating system software, application programming and system configuration sufficient to be able to perform the duties related to the work assignment.

Knowledge of planning, coordination, and execution of business functions, resource allocation, and production.

Level of Supervision Exercised

May perform supervision or lead work on a project or rotating basis.

Education Requirement

Bachelor's Degree in Computer Science, Computer Information Systems, Business Administration, Mathematics, or a related field.

Experience Requirement

Three (3) years of professional information technology experience installing, maintaining, and/or modifying operating system and/or network operating system software and associated hardware. Two of these years must include experience in designing and implementing enterprise level systems and scalable solutions.

Education & Experience Equivalency

One (1) year of the appropriate type and level of experience may be substituted for each required year of post-high school education.

Additional appropriate education may be substituted for the minimum experience requirements.

Licensure & Certification

By position, may require a license or certification as it relates to the specific area of application.

Working Environment

For DPL Positions Specifically:

Potential exposure to hazardous anesthetic agents, body fluids, and bio-wastes.
Atmospheric Conditions: conditions that affect the skin, eyes or respiratory system.
Potential exposure to cold temperature, cold enough to cause bodily discomfort.
Potential exposure to cold weather conditions (indoor/outdoor).
Potential exposure to conditions that affect the skin or respiratory system.
Potential exposure to dust.
Potential exposure to extreme temperature changes.
Potential exposure to hazardous conditions where there is a danger to life, body, and/or health.
Potential exposure to hazardous/toxic chemicals.
Potential exposure to hazards from electro/mechanical/power equipment.
Potential exposure to hazards of steam and heat.
Potential exposure to heat temperatures, hot enough to cause bodily discomfort.
Potential exposure to hot and humid work environment.
Potential exposure to housekeeping/cleaning agents/chemicals.
Potential exposure to infection from disease-bearing specimens.
Potential exposure to infections and contagious diseases.
Potential exposure to odorous chemicals.
Potential exposure to pesticides or fertilizers.
Potential exposure to the risk of blood borne diseases.
Potential exposure to temperature changes: variations in temperature from hot too cold.
Potential exposure to temperature changes: variations in temperature from hot to cold.
Potential exposure to unpleasant elements (accidents, injuries, and illness).
Extreme cold conditions.
Handles emergency or crisis situations.
Noise sufficient to cause distraction or possible hearing loss.
Personal Safety: aware of surroundings, people, and events.
Pressure due to multiple calls and inquiries.
Subject to long, irregular hours.
Subject to many interruptions.
Subject to burns and cuts.
Subject to electrical and radiant energy hazards.
Subject to hazards of flammable or explosive gases.
Subject to injury from moving parts of equipment or vehicles.
Subject to precarious or high locations.
Subject to pressure for multiple calls, inquiries, and interruptions.
Subject to varying and unpredictable situations.
Subject to traffic, roadways, and pedestrians.
Subject to vibrations and strain on the body to cause bodily harm if endured daily.
Temperature Changes: variations in temperature from hot too cold.

Temperature Changes: variations in temperatures from hot too cold when works in field.
Wet: frequent contact with water or other liquid.
Wet: frequent contact with water, liquid, chemicals, or sanitary sewage.
Works in precarious or high locations

Level of Physical Demand

For DPL Positions Specifically:
3-Medium (20-50 lbs.) to 4- Heavy Work (50-100 lbs.)

Physical Demands

For DPL Positions Specifically:

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs.):

Agility: Ability to move quickly and easily.
Balancing: Maintaining equilibrium.
Carrying: Transporting or moving an object.
Climbing: Ascending or descending an object or ladder.
Color vision: Ability to distinguish and identify different colors.
Crawling: Moving about in a low or crouched position.
Crouching: Positioning body downward and forward.
Depth Perception: Ability to judge distances and space relationships.
Eye/Hand/Foot Coordination: Performing work through using two or more body parts or other devices.
Feeling: Perceiving attributes of objects by means of skin receptors, communication, or otherwise.
Field of Vision: Ability to sharply detect or perceive objects peripherally.
Fine Dexterity: Sufficient coordination to operate a vehicle and manipulate objects.
Fingering: Picking and pinching, through use of fingers or otherwise.
Handling: Seizing, holding, grasping, through use of hands, fingers, or other means.
Hazards: Conditions where there is danger to life, body and/or health.
Hearing/Talking: Perceiving and comprehending the nature and direction of sounds/ability to communicate ideas.
Hearing: Perceiving and comprehending the nature and direction of sounds.
Kneeling: Assuming a lowered position.
Lifting: By Position, may move objects 20-50 pounds, or 50-100 pounds from one level to another.
Neck Flexion: Perceiving objects located above or below.
Physical Strength: Exerts force to transport objects of 50 pounds or more.
Pulling: Exerting force upon an object so that it is moving to the person.
Pushing: Exerting force upon on object so that it moves away from the person.
Reaching: Extending the hands and arms or other device in any direction.
Repetitive motions: Making frequent or continuous movements.
Sitting: Remaining in a stationary position.
Stamina: Ability to work over long periods of time without tiring.
Standing: Remaining in a stationary position.
Stooping: Positioning oneself low to the ground.
Talking: Communicating ideas or exchanging information.
Vision Far Acuity: Ability to perceive or detect objects clearly at 20 feet or more.
Vision Near Acuity: Ability to perceive or detect objects at 20 inches or less.
Walking: Ability to move or traverse from one location to another.
Written Comprehension: Ability to discern the meaning of written words.

Background Check Requirement

Criminal Check
Education Check
Employment Verification
By position, Motor Vehicle Record

Assessment Requirement

None

Probation Period

None

Class Detail

Pay Grade: EX-15
FLSA Code: Y
Established Date: 12/15/2019
Established By: JH
Revised Date: 6/9/2026
Revised By: BM
Class History: 6/9/26 – updated level of supervision exercised.