County of El Dorado   February 2009

INFORMATION TECHNOLOGY ANALYST ~~TRAINEE/~~I/II –
~~Server Administration~~
~~(Deep Class)~~
SERVER DESIGN AND ADMINISTRATION

DEFINITION

Under general supervision or direction, performs a ~~variety~~diverse range of professional, ~~technical and~~ analytical duties in the ~~operation of server administration, maintenance,~~ design ~~and,~~ engineering, enhancement, administration, and maintenance of County information technology servers and related systems, including server hardware and core infrastructure applications; analyzes customer and enterprise infrastructure client/server systems requirements; develops and maintains department and enterprise infrastructure client/server architectures~~.~~; and performs related duties as assigned.
~~DISTINGUISHING~~
SUPERVISION RECEIVED AND EXERCISED

Receives general supervision or direction from assigned supervisory or management personnel. Exercises no direct supervision over staff but may lead the work of staff on assigned projects.

CLASS CHARACTERISTICS

Information Technology Analyst I – Server Design and Administration: This is ~~a multi~~the entry-level ~~deep~~classification in the Information Technology Analyst – Server Design and Administration class ~~in which~~ series. Initially under general supervision, incumbents ~~may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on~~ learn the operational aspects of the County's information technology architecture as well as its core hardware and software platforms. As experience ~~and proficiency gained in~~ is gained, assignments become more varied, complex, and difficult, and the degree of supervision and frequent review of work lessens as an incumbent demonstrates skill to perform the work independently. Positions at this ~~specialty classification. In the Information Technology Analyst Trainee~~ level~~, incumbents receive training on the day to day tasks associated with this~~ usually perform most of the duties required of the positions at the II-level, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

Information Technology Analyst II – Server Design and Administration: This is the fully qualified journey-level classification ~~series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class.~~ in the Information Technology Analyst ~~II is the journey level in the~~ – Server Design and Administration class series~~; incumbents are technically proficient in executing assigned duties. Incumbents in~~ where incumbents perform the full range of server design, engineering, enhancement, administration, and maintenance. Positions at this level are distinguished from the I-level by the performance of the full range of duties, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit.

This class is further distinguished from the Information Technology Analyst ~~II classification may be~~III– Server Design and Administration in that the latter is responsible for more complex and higher-level

server design and administration functions and provides lead oversight to assigned ~~as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of~~ staff.

Positions in the Information Technology Analyst ~~Trainee/I/II. The Information Technology Analyst~~ Server Design and Administration class series are flexibly staffed and positions at the II-level are normally filled by advancement from the I-level after gaining the knowledge, skill, and experience which meets the qualifications for the II ~~level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized~~ level, and after demonstrating the ability to perform the work of the higher-level class.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

➢ Performs a diverse range of professional, ~~technical and~~ analytical duties. ~~~~ in the design, engineering, enhancement, administration, and maintenance of County information technology servers and related systems, including server hardware and core infrastructure applications.

~~EXAMPLES OF DUTIES (Illustrative Only)~~

~~NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.~~

~~☺Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex department or enterprise infrastructure client/server systems.~~
~~☺Coordinates and collaborates with counterparts in other classifications in the integration of client/server systems for operability over multiple platforms and technologies.~~
~~➢ Acts as liaison between vendors, technical support and departments to resolve client/server system impairments; coordinates and implements corrective measures.~~
~~➢ Models changes to hardware and software configurations to optimize the utilization of resources.~~

➢ Determines needs and develops/designs plans and proposals to meet the needs of department or enterprise infrastructure client/server users.

➢ Researches to determine feasibility~~,~~ and advises and recommends the appropriate uses of department or enterprise infrastructure client/server technology.

➢ Plans and determines system requirements; designs, builds, tests, implements, maintains, and enhances complex department or enterprise infrastructure client/server systems over multiple platforms, and technologies, ensuring that the design incorporates comprehensive security measures.

➢ Determines proper installation parameters for client/server software/hardware for smooth integration, transition, and efficiency.

➢ Installs third-party department or enterprise infrastructure client/server software; modifies software as necessary to meet County requirements; installs vendor supplied maintenance and enhancements.

➢ Participates in the configuration, implementation, and troubleshooting of server platforms and software and coordinates/collaborates with other information technology staff in the integration of client/server systems for operability.

➢ Acts as liaison between vendors, technical support, and departments to resolve client/server system impairments; coordinates and implements corrective measures.

➢ Models changes to hardware and software configurations to optimize the utilization of resources.

➢ Develops and implements comprehensive test plans to ensure that department or enterprise infrastructure client/server technology components are tested and debugged.

~~☺Monitors and enforces security policies and procedures.~~
~~☺Installs third party department or enterprise infrastructure client/server software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.~~
~~☺Determines proper installation parameters for client/server software/hardware for smooth integration, transition and efficiency.~~
~~☺Provides assistance and training for County staff as needed.~~

➢ ~~Monitors,~~ tests, and collects data on department or enterprise infrastructure client/server system

performance.

➢ ~~Plans~~Monitors and enforces security policies and procedures; plans, develops ~~and;~~ implements backup and recovery procedures; and crease and documents procedures on newly developed infrastructures.

➢ Determines and adjusts thresholds for client/server system resources.

➢ Writes and maintains comprehensive technical documentation for assigned projects including work flow diagrams, system design specifications, and policies and procedures for the utilization of specific hardware and/or software.

➢ Provides training for County staff as assigned.

○ Participates in ~~enterprise~~ projects.

➢ ~~May~~ related to assigned specialty field; may function as a leader of a small project team ~~assigned to projects covering multiple platforms and/or specialty fields; provides~~; may provide limited leadership, training, and mentoring to other Information ~~Technology~~Technologies staff ~~assigned to the project team.~~ regarding areas of expertise.

○ ~~Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.~~

➢ ~~Provides~~May provide data for justification of unit budget in relation to ~~assigned projects~~work assignments.

○ ~~May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.~~

➢ ~~Attendance and punctuality that is observant of scheduled hours on a regular basis.~~

➢ Conducts research and stays current on new trends and innovative solutions for software solutions to business processes; recommends new technologies which would improve the department's or client's operational effectiveness.

➢ Performs ~~other~~related duties as assigned.

QUALIFICATIONS

~~NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.~~

~~General~~ *Some knowledge and abilities may be gained by employees at the entry (I) level while in a learning capacity.*

Knowledge of:

● ➢ Principles and techniques of client/server architectures and methodologies.

● ➢ Design, installation, and maintenance of department or enterprise infrastructure client/server systems ~~.~~, including operating system resource requirements.

➢ ~~Various networking~~Methods and techniques of analyzing business processes and developing solutions.

➢ Principles and functions of core server platforms and operating systems, including Active Directory, System Center Configuration Manager, and related technologies.

➢ Hypervisor/virtualization concepts and administration.

● ➢ Network services and protocols such as ~~DNS,~~ TCP/IP v4 and v6 protocols, and DHCP, ~~WINS, etc.~~ DNS, SNMP, SMTP, FTP, HTTP, HTTPS, and ICMP.

● ~~Remote administration of department or enterprise infrastructure client/server systems.~~

● ~~Server virtualization and various data storage fundamentals (NAS, SAN, SAS)~~

● ~~Computer operations and facilities.~~

● ~~Business systems applications.~~

● ➢ ~~Principles and practices of technical problem solving.~~

● ~~Principles, processes, techniques of project management and related software.~~

● ~~Methods of long term technology assessment and deployment.~~

● ~~Principles, practices and techniques of providing customer service.~~

● ➢ ~~Principles and practices of producing effective project and technical documentation.~~

● ➢ ~~Restart and recovery concepts.~~

● ~~Basic supervisory practices and principles.~~

● ~~Team dynamics and team building.~~

Specific Knowledge:
- Fundamentals and concepts of client/server and desktop computer operating systems
- Enterprise infrastructure client/server systems configurations.
- Client/server hardware/software and operating system resource requirements.
- ➢ Planning and implementation of client/server hardware/software installation/upgrades.
- ➢ Development of utility programs and shell scripts.
  - Use of server diagnostic systems and tools.
- ➢ Managing and monitoring server performance and the use of server diagnostic systems and tools.
  - Managing disk storage arrays
- ➢ Management ofMethods of deploying and administering department or enterprise infrastructure client/server application deploymentsapplications.
- ➢ Enterprise backup administration including pool creation and tape management.
- ➢ Networking services and protocols.
- ➢ Principles and practices of technical problem solving.
- ➢ Methods and techniques of evaluating technology products for potential modification to meet business specifications.
- ➢ Methods and techniques of designing and coordinating information technology testing processes.
- ➢ Industry best practices of data center virtualization, management, and control.
- ➢ Restart and recovery concepts.
- ➢ Methods and techniques of conducting research.
- ➢ Principles and techniques of leadership and working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- ➢ Methods and techniques of developing and delivering training.
- ➢ Principles and practices of producing effective project and technical documentation.

Skill In:
- ➢ RecognizingTechniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and County staff.
- ➢ The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- ➢ Modern equipment and communication tools used for business functions and program, project, and task coordination.
- ➢ Computers and software programs (e.g., Microsoft software packages) to conduct, compile, and/or generate documentation.

Ability to:

- ➢ Recognize server problems, developingdevelop recommendations and solutions, and managingmanage corrections.
- ➢ IntegratingIntegrate department and/or enterprise infrastructure client/server systems.
- ➢ AdministrationAdminister and maintenance ofmaintain centralized directory, file, and print services.
- ➢ ClientManage client/server user permissionpermissions and account managementaccounts.
- ➢ Enforcement ofEnforce server security policies and procedures through the use of account, directory, and file rights filters.
  - Making technical oral presentations to technicalDevelop and non technical audiences.
- ➢ Evaluating, installing,implement testing and implementingmodels.
- ➢ Evaluate, install, test, and implement new servers, and server operating systems.
- ➢ InstallingInstall new versions, releases, or maintenance levels of existing server and desktop operating systems and related components through centralized resource.
- ➢ CoordinatingCoordinate activities with vendors, clients, and staff.
- ➢ UnderstandingCollaborate with colleagues in developing and documenting process work flows, applications specifications, and models.

➢ Make technical oral presentations to technical and non-technical audiences.
➢ Understand complex information technology systems and issues.
  • Interpreting, applying rules and explaining policies and procedures.
➢ UsingUse sound independent judgment within established guidelines.
➢ PreparingPrepare clear and concise reports, correspondence, documentation, and other written materialsmaterial.
➢ Communicating effectively,Communicate clearly and concisely, both orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors. using appropriate English grammar and syntax.
➢ Establishing and maintainingUnderstand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
➢ Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
➢ Establish, maintain, and foster positive and effective working relationships with those contacted in the course of the work.
  • Planning, assigning and reviewing the work of others, when required.
  • Training others in work procedures.
  • Promoting and maintaining a team environment.

Special Requirements:

May be required to work on call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:
Any combination of the required experience, education, and training that would provide the essential knowledge, skills, and abilities is qualifying.

Information Technology Analyst Trainee:I – Server Design and Administration:

EITHER (1) Equivalent to graduation a bachelor's degree from aan accredited four--year college or university with major coursework in Computer Science, MIS, Business Administration, or information technology, computer science, or a closely related field. Possession of one or more approved nationally recognized industry specific technology certifications may be substituted for some or all of the education.

Information Technology Analyst II – Server Design and Administration:

Equivalent to a bachelor's degree from an accredited four-year college or university with major coursework in information technology, computer science, or a closely related field; possession of one or more approved nationally recognized industry specific technology certifications may be substituted for some or all of the education; and

EITHER with emphasis in

Three (3) years of professional experience providing analytical support for enterprise infrastructure server administration, maintenance, design and engineering.or departmental servers and platforms;

OR (2) Equivalent to an Associate of Arts degree in Computer Science and completion of a certificate program in Computer Science with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

~~OR (4)~~ OR

Two ~~years of experience equivalent to the County's classification of Information Technology Technician II.~~

~~Information Technology Analyst I:~~

~~EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.~~

~~AND One year verifiable, paid~~(2) years of professional experience ~~working in an information technology environment.~~

~~OR (2) One year of experience~~at a level equivalent to the County's class of Information Technology Analyst ~~Trainee~~I – Server Design and Administration.

~~OR (3) Completion of a certificate program in Computer Science, with emphasis in enterprise infrastructure server administration, maintenance, design and engineering, and two years of verifiable experience working in this specialty.~~

~~OR (4) One year of experience equivalent to the County's class of Supervising Information Technology Technician~~

~~AND Completion of a certificate program that is equivalent to the major course work for an Associate of Arts degree in computer science, or completion of a certificate program with emphasis in enterprise infrastructure server administration, maintenance, and design and engineering.~~

~~Information Technology Analyst II:~~

~~EITHER 1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.~~

~~AND: (a) Three years experience working in the field of enterprise infrastructure server administration, maintenance, design and engineering.~~

~~OR (b) Two years experience equivalent to the County's class of Information Technology Analyst I – Server Administration.~~

~~OR (2) Completion of a certificate program in Computer Science with emphasis in enterprise infrastructure server administration, maintenance, design and engineering and four years of verifiable experience working in enterprise infrastructure server administration, maintenance, design and engineering or a similar field in an information systems environment similar to that of the County.~~

~~NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.~~

Licenses and Certifications:

➢ Possession of, or ability to obtain and maintain, a valid California Driver's License by time of appointment and a satisfactory driving record.

PHYSICAL DEMANDS

Must possess mobility to work in an office setting; use standard office equipment, including a computer; some positions may be required to operate a motor vehicle; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. Standing in and walking between work areas is frequently required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification frequently bend, stoop, kneel, and reach to perform assigned duties, as well as push and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds. Reasonable accommodations will be made for individuals on a case-by-case basis.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with loud to moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

WORKING CONDITIONS

Must be willing to work after hours, weekends, and holidays as needed. Must be able to pass a thorough background investigation.
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