

SR. INFORMATION TECHNOLOGY ANALYST
Applications/Web Development and Support

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: analysis of customer and system requirements; development, implementation, and maintenance of complex web, enterprise, and/or departmental computer applications and systems; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst-Applications/Web Development and Support series. Positions at this level are distinguished from the Information Technology Analyst Trainee/I/II-Applications/Web Development and Support in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in applications and/or web development technologies. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommends appropriate discipline and other personnel actions.
- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex and specialized business, department or Countywide systems.
- Analyzes, designs, tests and implements assigned complex projects which may encompass multiple technologies.
- Coordinates and collaborates with counterparts in other classifications in the integration of information systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, IT staff and system users to resolve web, applications, or system problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against web and application system configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the needs of customers.
- Researches to determine feasibility, advises and recommends appropriate uses of information technology.
- Develops and implements comprehensive test plans to ensure that information technology components are tested and debugged.
- Resolves complex technical problems; provides training and assistance to staff.
- Monitors and enforces security policies and procedures.
- Installs third party software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Determines and gives direction to staff for proper installation parameters for software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for customers as needed.
- Monitors and collects data on system performance.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts thresholds for system resources.
- Participates in and/or directs projects.

QUALIFICATIONS

General Knowledge:

- Advanced principles of computer and information processing.
- Business systems applications.
- Software systems development lifecycles.
- Database management systems.
- Programming languages, utilities and tools.
- Website design and development concepts.
- Design, installation and maintenance of mainframe, client/server and desktop applications.
- Principles and techniques of software and systems quality assurance and control.
- Principles and practices of technical problem solving.
- Principles, processes, and techniques of project management and related software.
- Principles and practices of producing effective project and technical documentation.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Restart and recovery concepts.
- Information technology standards.
- Current trends and technological advancements.
- Supervisory principles and practices including work planning and scheduling, work review and evaluation, employee training and discipline, and team dynamics and team building.

Specific Knowledge

- Definition of technical specifications from customer and business requirements.
- Business systems analysis and business planning process.
- Practices of effective communication of technical issues to customer and client community.
- Software systems development life cycles.
- Advanced systems and program design and analysis.
- Advanced principles and techniques of programming.
- Advanced programming languages, tools, and techniques.
- Advanced website design concepts and standards.
- Advanced website development languages, tools, and techniques.
- Advanced web based application design, tools and techniques.
- Advanced client/server database management/administration.
- Application of business requirements to database design.
- Advanced database management concepts.
- Advanced use of database tools and utilities.
- Advanced use of data/file management tools.
- Development and use of proper test plans and procedures.
- Customer acceptance testing.
- Principles and practices of training, instructing and supporting customers.

Skill In:

- Expert understanding of complex information technology applications/systems and issues.
- Expert skills in design, development, installation and maintenance of mainframe, web, client/server, and desktop computer applications.
- Expert skills in integrating information technology applications and systems.
- Expert skills in recognizing application and/or web problems, developing recommendations and solutions, and managing corrections.
- Advanced website design, development and support.

- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, organizing, coordinating, and directing the work of assigned staff.
- 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 Investigation to disclose any criminal record.

Education and Experience:

EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in application and/or web development, **OR**, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in application and/or web development, **AND** two years of professional level experience working in systems analysis, application and/or web development.

AND

Five years experience working in application and/or web development. At least two years of experience must have been in a multi-platform information systems environment.

OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II-Applications/Web Development and Support.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.

SR. INFORMATION TECHNOLOGY ANALYST
Networking

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: network and information security management, administration, maintenance, design and engineering; analysis of enterprise infrastructure network and information security requirements; development, implementation, and maintenance of complex networks and information security systems; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst – Networking series. Positions at this level are distinguished from the Information Technology Analyst I/II – Networking in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in the networking and information security management technologies. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommend appropriate discipline and other personnel actions.
- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex and specialized network and information security systems.
- Analyzes, designs, tests and implements assigned complex projects which may require coordination and collaboration with counterparts in other IT classifications and multiple technologies.
- Integrates complex or specialized network and/or information security system technologies.
- Acts as liaison between vendors, IT staff and system users to resolve enterprise network and/or information security problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against enterprise network and/or information security hardware/software configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the network and/or information security needs of the enterprise.
- Researches to determine feasibility, advises and recommends appropriate uses of enterprise network and/or information security system technology.
- Designs, develops and implements comprehensive test plans to ensure that enterprise network and/or information security technology components and changes thereto are tested and debugged prior to implementation.
- Resolves complex technical network problems; provides training and assistance to County staff.
- Monitors and enforces security policies and procedures.
- Installs third party enterprise infrastructure network and/or information security system software; modifies software as necessary to meet specific enterprise requirements; installs vendor supplied maintenance and enhancements.
- Determines and gives direction to staff on proper installation parameters for enterprise infrastructure network and/or information security system software/hardware for smooth integration, transition and efficiency.
- Monitors and collects data on enterprise infrastructure network and/or information security system performance and proposes necessary modifications.
- Determines and adjusts enterprise infrastructure network and/or information security system performance thresholds for system resources.
- Participates in and/or directs projects.

QUALIFICATIONS

General Knowledge:

- Advanced principles of enterprise infrastructure network topologies and architectures.
- Principles of computer information security and privacy practices.
- Design, installation and maintenance of enterprise infrastructure network and/or information security systems.
- Advanced knowledge of network/server/desktop operating systems.
- Voice over Internet Protocol (VoIP) principles and practices.
- Principles and practices of technical problem solving.
- 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.
- Principles, processes, and techniques of project management and related software.
- Methods of long-term technology assessment and deployment.
- Current trends and technological advancements.

Specific Knowledge:

- Superior knowledge in logical and physical enterprise infrastructure network and/or information security systems design, implementation, testing and maintenance.
- Enterprise infrastructure network and/or information security systems software/hardware vendors, products and pricing structures.
- Complex data communication and network concepts and principles.
- Sophisticated Internet and Intranet architecture and vendor offerings.
- Network security policies, techniques and procedures.
- Network and/or information security system documentation, configuration, maintenance and diagnostic procedures and techniques.
- Advanced knowledge of network and/or information security system diagnostic tools.
- Highly advanced knowledge of various networking services and protocols such as DNS, DHCP, WINS, etc
- Advanced knowledge of IP addressing, routing and switching principles and protocols.
- Advanced knowledge and understanding of remote access methodologies and enterprise network protection appliances and/or software.
- Hacker tools, techniques, exploit methods.
- Information security incident response and analysis of computer intrusions or data breaches.
- Highly knowledgeable in the OSI Reference Model.

Skill In:

- Recognizing complex enterprise infrastructure network and/or information security system problems, developing recommendations and solutions, and managing corrections.
- Understanding complex and specialized enterprise infrastructure network and/or information security systems and issues.
- Integrating enterprise infrastructure network and information security systems.
- Analyzing and critiquing sophisticated enterprise infrastructure network connectivity related issues during installations and/or upgrades.
- Developing detailed enterprise information security designs integrating firewalls, Intrusion Prevention Systems (IPS), secure access control systems and other intricate security software and hardware.
- Performing enterprise infrastructure network and information security forensics.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.

- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, organizing, coordinating, and directing the work of assigned staff.
- 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 Investigation to disclose any criminal record.

Education and Experience:

- EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in network and/or information security management, administration, maintenance, design and engineering, **OR**, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in network and/or information security management, administration, maintenance, design and engineering, **AND** two years of professional level experience working in network and/or information security management, administration, maintenance, design and engineering.

AND

Five years experience working in network and/or information security management, administration, maintenance, design and engineering. At least two years of experience must have been in a multi-platform information systems environment.

- OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II- Networking.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.

SR. INFORMATION TECHNOLOGY ANALYST
Office Systems

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: desktop computer systems management, administration and/or support; modification and maintenance of complex desktop computer systems; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst – Office Systems series. Positions at this level are distinguished from the Information Technology Analyst I/II – Office Systems in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in the desktop computer systems management technologies. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommend appropriate discipline and other personnel actions.
- Plans, determines requirements, modifies, builds, tests, implements, maintains and enhances complex and specialized desktop computer systems.
- Analyzes, tests and implements assigned complex projects which may require coordination and collaboration with counterparts in other IT classifications and multiple technologies.
- Integrates complex or specialized desktop computer system technologies.
- Acts as liaison between vendors, IT staff and system users to resolve desktop computer system problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against desktop computer system hardware and software configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the needs of the enterprise or user.
- Researches to determine feasibility, advises and recommends appropriate uses of desktop computer system technology.
- Develops and implements comprehensive test plans to ensure that desktop computer system technology components and changes thereto are tested and debugged prior to implementation.
- Resolves complex technical desktop computer system problems; provides training and assistance to County staff.
- Monitors and enforces security policies and procedures.
- Installs third party desktop computer system software; modifies software as necessary to meet specific requirements; installs vendor supplied maintenance and enhancements.
- Determines and gives direction to staff on proper installation parameters for desktop computer system software/hardware for smooth integration, transition and efficiency.
- Monitors and collects data on desktop computer system performance and proposes necessary modifications.
- Determines and adjusts desktop computer system performance thresholds for system resources.
- Participates in and/or directs projects.

QUALIFICATIONS**General Knowledge:**

- Advanced design, installation and maintenance of department or enterprise desktop computer systems.
- Advanced knowledge of third party desktop computer system and client/server applications.

- Superior knowledge of methods of operation and interaction of desktop computer systems hardware components.
- Interaction with third party software and desktop/network operating systems
- Advanced principles of networking technologies.
- Principles of computer and information processing.
- Computer operations and facilities.
- Principles and practices of technical problem solving.
- 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.
- Current trends and technological advancements.
- Supervisory principles and practices including work planning and scheduling, work review and evaluation, employee training and discipline, and team dynamics and team building.

Specific Knowledge:

- Enterprise desktop computer systems standards, policies and procedures.
- Sophisticated knowledge and concepts of designing customer hardware, software, and connectivity solutions.
- Advanced principles and practices of training, instructing and supporting customers.
- Mature concepts of installation, configuration, and testing of internal hardware components.
- Detailed planning required for installation and testing of systems in diverse customer environments.
- Advanced methodologies of desktop computer systems maintenance, monitoring and troubleshooting procedures.
- Architecture of desktop operating systems and LAN's.
- Thorough knowledge of LAN/WAN logical and physical designs.
- Intricate desktop computer systems software internal functions and customer interfaces.
- Communication techniques to convey hardware and software issues to customers.
- Superior knowledge in troubleshooting and monitoring desktop computer systems hardware and software.
- Advanced knowledge in the installation and configuration of desktop OS/NOS/office systems software.

Skill In:

- Advanced Integration of desktop computer systems technologies.
- Detailed understanding of activities requiring interaction with desktop computer system software and operating systems to diagnose and resolve unique, non-recurring problems.
- Distinguishing the complex interaction of numerous computer platforms in a multi-layered client/server environment.
- Interconnecting desktop computer systems with diverse systems including file/email/application servers, mainframe systems and/or databases.
- Recognizing complex desktop computer system/LAN problems, developing recommendations and solutions, and managing corrections.
- Understanding complex and specialized desktop/LAN information technology systems and issues.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, organizing, coordinating, and directing the work of assigned staff.
- 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 Investigation to disclose any criminal record.

Education and Experience:

EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in desktop computer system management, administration and/or support, **OR**, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in desktop computer system management, administration and/or support, **AND** two years of professional level experience working in desktop computer system management, administration and/or support.

AND

Five years experience working in desktop computer system management, administration and/or support. At least two years of experience must have been in a multi-platform information systems environment.

OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II-Office Systems.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.

SR. INFORMATION TECHNOLOGY ANALYST
Operating Systems

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: analysis of mainframe (enterprise) system requirements; development, implementation, provides technical support and maintenance of complex enterprise computer systems, applications and networks; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst – Operating Systems series. Positions at this level are distinguished from the Information Technology Analyst I/II – Operating Systems in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in the operating systems and database technologies. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommend appropriate discipline and other personnel actions.
- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex and specialized enterprise systems.
- Analyzes, designs, tests and implements assigned complex projects which may require coordination and collaboration with counterparts in other IT classifications and multiple technologies.
- Integrates complex or specialized enterprise information technologies.
- Acts as liaison between vendors, IT staff and system users to resolve enterprise operating system and database problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against enterprise hardware and software configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the needs of the enterprise.
- Researches to determine feasibility, advises and recommends appropriate uses of enterprise information technology.
- Designs, develops and implements comprehensive test plans to ensure that information technology components and changes thereto are tested and debugged prior to implementation.
- Resolves complex technical problems; provides training and assistance to County staff.
- Develops, monitors and enforces security policies and procedures.
- Installs third party software; modifies software as necessary to meet specific enterprise requirements; installs vendor supplied maintenance and enhancements.
- Determines and gives directions to staff for proper installation parameters for software/hardware for smooth integration, transition and efficiency.
- Monitors and collects data on enterprise system performance and proposes necessary modifications.
- Designs, plans, develops and implements backup and recovery procedures.
- Determines and adjusts enterprise performance thresholds for system resources.
- Participates in and/or directs projects.

QUALIFICATIONS

General Knowledge:

- Principles of computer and information processing.
- Business systems applications.
- Principles and techniques of software and systems quality assurance and control.
- Principles and practices of technical problem solving.
- Principles, processes, and techniques of project management and related software.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Design, installation and maintenance of enterprise computer systems.
- Principles and practices of producing effective project and technical documentation.
- Restart and recovery concepts.
- Information technology standards.
- Current trends and technological advancements.
- Supervisory principles and practices including work planning and scheduling, work review and evaluation, employee training and discipline, and team dynamics and team building.

Specific Knowledge:

- Advanced database management systems (DBMS) knowledge.
- Application of business requirements to advanced database design.
- Advanced Logical data schema.
- Advanced use of database tools.
- Advanced knowledge of data/file management tools.
- Advanced knowledge of use of database utilities.
- Expert knowledge of methods and techniques of file and data backup and recovery.
- Expert knowledge of database security methods and techniques.
- Physical control standards and procedures.
- Advanced knowledge of enterprise computer operating systems.
- Advanced knowledge of computer operating systems configurations.
- Expert knowledge of operating systems architecture, structure, operations, and utilities.
- Operating systems and systems utilities version control principles.

Skill In:

- Expert skill in recognizing operating system and database problems, developing recommendations and solutions, and managing corrections.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Expert understanding complex and specialized enterprise information technology systems and issues.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, organizing, coordinating, and directing the work of assigned staff.
- 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 Investigation to disclose any criminal record.

Education and Experience:

EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in operating systems and/or database administration, **OR**, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in operating systems and/or database administration, **AND** two years of professional level experience working in operating systems and/or database administration.

AND

Five years experience working in operating systems and/or database administration.
At least two years of experience must have been in a multi-platform information systems environment.

OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II-Operating Systems.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.

SR. INFORMATION TECHNOLOGY ANALYST
Server Administration

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: server management, administration, maintenance, design and engineering; analysis of enterprise infrastructure client/server systems requirements; development, implementation, and maintenance of complex departmental and enterprise infrastructure client/server systems; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst – Server Administration series. Positions at this level are distinguished from the Information Technology Analyst I/II – Server Administration in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in server management technology. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommend appropriate discipline and other personnel actions.
- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex and specialized enterprise infrastructure client/server systems.
- Analyzes, designs, tests and implements assigned complex projects which may require coordination and collaboration with counterparts in other IT classifications and multiple technologies.
- Integrates complex or specialized enterprise infrastructure client/server system technologies.
- Acts as liaison between vendors, IT staff and system users to resolve enterprise infrastructure client/server system problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against department or enterprise infrastructure client/server system hardware and software configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the needs of the enterprise.
- Researches to determine feasibility, advises and recommends appropriate uses of enterprise infrastructure client/server system technology.
- Designs, develops and implements comprehensive test plans to ensure that department or enterprise client/server system technology components and changes thereto are tested and debugged prior to implementation.
- Resolves complex technical problems; provides training and assistance to County staff.
- Monitors and enforces security policies and procedures.
- Installs third party department or enterprise infrastructure client/server system software; modifies software as necessary to meet specific enterprise requirements; installs vendor supplied maintenance and enhancements.
- Determines and gives direction to staff for proper installation parameters for enterprise infrastructure client/server software/hardware for smooth integration, transition and efficiency.
- Monitors and collects data on department or enterprise infrastructure client/server system performance and proposes necessary modifications.
- Designs, plans, develops and implements backup and recovery procedures.
- Determines and adjusts department or enterprise infrastructure client/server system performance thresholds for system resources.
- Participates in and/or directs projects.

QUALIFICATIONS

General Knowledge:

- Principles and techniques of client/server architectures and methodologies.
- Design, installation and maintenance of department or enterprise infrastructure client/server systems.
- Various networking services and protocols such as DNS, DHCP, WINS, etc.
- 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:

- Advanced knowledge and concepts of client/server and desktop computer operating systems.
- Complex enterprise infrastructure client/server systems configurations.
- Client/server hardware/software and operating system resource requirements.
- Planning, design and implementation of client/server hardware/software installation/upgrades.
- Advanced development of utility programs and shell scripts.
- Skilled use of server diagnostic systems and tools.
- Managing and monitoring server performance.
- Managing disk storage arrays
- Management of department or enterprise infrastructure client/server application deployments.
- Enterprise backup management, to include pool creation, tape management, file recoveries and managing off-site tape storage.
- Advanced knowledge and concepts of server-based, distributed, client/server and desktop computer operating systems.
- Advanced understanding of server/desktop/network operating systems architecture, structure, operations, and utilities.
- Systems utilities version control principles.

Skill In:

- Recognizing complex server problems, developing recommendations and solutions, and managing corrections.
- Integrating highly sophisticated department and/or enterprise infrastructure client/server systems.
- Advanced administration and maintenance of centralized directory, file and print services.
- Complicated technical client/server user permission and account management.
- Expert knowledge of the enforcement of server security policies and procedures through the use of account, directory and file rights filters.
- Evaluating, installing, testing and implementing new servers, server operating systems.
- Installing new versions, releases or maintenance levels of existing server and desktop operating systems and related components through centralized resource.
- Designing and engineering highly complex client/server systems and solutions based on business requirements.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating technical activities with vendors, clients and staff.
- Understanding complex information technology systems and issues.

- Interpreting, applying rules and explaining technical policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining 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 Investigation to disclose any criminal record.

Education and Experience:

EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in server management, administration, maintenance, design and/or engineering. **OR**, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in server management, administration, maintenance, design and/or engineering **AND** two years of professional level experience working in server management, administration, maintenance, design and/or engineering.

AND

Five years experience working in server management, administration, maintenance, design and/or engineering. At least two years of experience must have been in a multi-platform information systems environment.

OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II - Server Administration.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.

SR. INFORMATION TECHNOLOGY ANALYST
Telecommunications

DEFINITION

Under general supervision, performs the more difficult, complex and specialized professional, technical and analytical duties including: enterprise infrastructure telecommunications systems management, administration, design and/or engineering; analysis of enterprise infrastructure telecommunications system requirements; development, implementation, and maintenance of complex telecommunications computer systems, applications and networks; this class may coordinate, direct, and review the work of other professional and support IT staff but is not considered a supervisory class; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This class is an advanced specialist level in the Information Technology Analyst – Telecommunications series. Positions at this level are distinguished from the Information Technology Analyst I/II – Telecommunications in that it requires a greater level of professional expertise in a specialized area of information technologies. Incumbents are expected to independently perform a full range of complex and difficult Information Technology Analyst duties at an advanced level. Successful performance requires thorough knowledge of and demonstrated proficiency in telephony solutions and telecommunications management technologies. The incumbent should exercise initiative and sound independent judgment within established guidelines. This class may provide lead direction or limited supervision to professional and support staff, but is distinguished from Supervising Information Technology Analyst in that the latter is the first full supervisory level in the Information Technology Analyst series.

EXAMPLES OF DUTIES (Illustrative Only)

- Provides lead direction, training, work review and evaluation to a small staff; organizes and assigns work, sets priorities and follows up to ensure coordination and completion of assigned work.
- Provides input into performance evaluations and disciplinary matters.
- Counsels staff; recommend appropriate discipline and other personnel actions.
- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex and specialized enterprise infrastructure telecommunications systems.
- Analyzes, designs, tests and implements assigned complex enterprise infrastructure telecommunications projects which may require coordination and collaboration with counterparts in other IT classifications and multiple technologies.
- Integrates complex or specialized enterprise infrastructure telecommunications system technologies.
- Acts as liaison between vendors, IT staff and system users to resolve enterprise telecommunications problems; designs, coordinates and implements corrective measures.
- Designs and models enhancements and other modifications against telecommunications hardware and software configurations to optimize the utilization of resources.
- Determines needs, develops plans and implements solutions to meet the needs of the County.
- Researches to determine feasibility, advises and recommends appropriate uses of telecommunications information technology.
- Develops and implements comprehensive test plans to ensure that enterprise infrastructure telecommunications system technology components and changes thereto are tested and debugged prior to implementation.
- Resolves complex technical problems; provides training and assistance to County staff.
- Monitors and enforces security policies and procedures.
- Installs third party telecommunications software; modifies software as necessary to meet specific enterprise requirements; installs vendor supplied maintenance and enhancements.
- Determines proper installation parameters for telecommunications software/hardware for smooth integration, transition and efficiency.

- Monitors and collects data on telecommunications system performance and proposes necessary modifications.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts telecommunications performance thresholds for system resources.
- Participates in and/or directs projects.
- Installs and maintains enterprise infrastructure telecommunications and networks throughout the County.

QUALIFICATIONS

General Knowledge:

- Advanced principles of structured cabling systems and installation techniques.
- Advanced principles of enterprise telephony systems and/or architecture.
- Advanced principles of enterprise voice mail platforms.
- Design, engineering, installation and maintenance of enterprise infrastructure telecommunications systems.
- Data communications, concepts and principles.
- 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:

- Intricate and complex design, build, manage and maintain traditional and Internet Protocol (IP) telephony systems.
- Sophisticated data and voice network design, maintenance and management.
- Detailed architecture and design of enterprise infrastructure telecommunications switches and voicemail systems.
- Advanced programming of telephony switches/call processors and voicemail systems.
- Advanced knowledge of global communications systems and local carriers.
- Superior trouble shooting and repair of telecommunications equipment.
- Telecommunications vendor operating policies, procedures and pricing structures.
- Advanced telecommunications distribution systems.
- Detailed knowledge in telecommunications codes, standards and regulations.
- Advanced network switching concepts and facilities.

Skill In:

- Recognizing most complex telecommunications problems, developing recommendations and solutions, and managing corrections.
- Understanding the most complex and specialized enterprise infrastructure telecommunications technology systems and issues.
- Advanced methods in integrating enterprise infrastructure telecommunications systems.
- Expert in administering telephony switches, call processors and/or voice mail systems to make additions disconnects and changes to the customer environment.

- Determining telecommunications facilities and environmental control requirements.
- Advanced design in modifying existing structured or customer cabling to meet industry standards.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others.
- 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 Investigation to disclose any criminal record.

Education and Experience:

EITHER (1) A Bachelor's degree from an accredited college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in enterprise infrastructure telecommunications management, administration, design and/or engineering, OR, Two years, (60+ semester units or 90+ quarter units), of college-level coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in enterprise infrastructure telecommunications management, administration, design and/or engineering, AND two years of professional level experience working in enterprise infrastructure telecommunications management, administration, design and/or engineering.

AND

Five years experience working in enterprise infrastructure telecommunications management, administration, design and/or engineering. At least two years of experience must have been in a multi-platform information systems environment.

OR (2) Two years experience at a level equivalent to the County's class of Information Technology Analyst II -Telecommunications.

NOTE: The above qualifications are a typically accepted way of obtaining the required knowledge and skills.