

**INFORMATION TECHNOLOGY SYSTEMS/DATABASE
ADMINISTRATOR ANALYST
Series Specification
Information Technology Systems/Database Administrator Analyst I
Information Technology Systems/Database Administrator Analyst II
Senior Information Technology Systems/Database Administrator Analyst**

DEFINITION

This series specification describes three classes that have the primary responsibility for all of the functions associated with supporting and/or administering systems and/or, databases, including the development of the future architecture of those systems and databases. The class is characterized by technical performance in the broadest and most complex areas; the highest level of system and organizational responsibility. Provides technical or project leadership at the college-wide or district-wide level. Employees in this series may specialize primarily on Systems Administration, primarily on Database Administration, or a combination of both. Specific focus and assignments within the Job Description may vary from employee to employee.

DISTINGUISHING CHARACTERISTICS

Systems Administration

Information Technology Systems/Database Administrator Analyst I: The Information Technology Systems/Database Administrator Analyst I is an experienced, senior-level specialist. Incumbent has primary responsibility for Systems or Database administration at the College-wide or District-wide level. The Information Technology Systems/Database Analyst I operates with routine oversight.

Information Technology Systems/Database Administrator Analyst II: The Information Technology Systems/Database Administrator Analyst II is an experienced Information Technology Systems/Database Administrator Analyst I, or equivalent who has primary responsibility for Systems and/or Database, administration across several major business systems, multiple Operating systems, multiple Database Management Systems, and with complex integration responsibilities. The Information Technology Systems/Database Administrator Analyst II is distinguished from the Information Technology Systems/Database Administrator Analyst I by the amount of supervision exercised, the complexity and scope of work performed, and the depth and breadth of knowledge and experience in the systems, database with supporting and/or administering systems and/or databases. The Information Technology Systems/Database Administrator Analyst II operates with moderate oversight.

Senior Information Technology Systems/Database Administrator Analyst: The Senior Information Technology Systems/Database Administrator Analyst is a senior systems and database administrator who performs the most complex activities within the scope of the Information Technology organization and has the deepest technical knowledge in the assigned areas. Incumbent typically specializes in several overlapping technical areas and/or has broad overlapping architectural responsibilities and may manage multiple projects while also administering several of the most critical production system components. The Senior Information Technology Systems/Database Administrator Analyst operates with minimal oversight.

TYPICAL DUTIES

Information Technology Systems/Database Administrator Analyst I:

Operations (including security, performance, problem resolution, & budgets):

- Maintains multiple servers, databases and application software across multiple systems.
- Performs installation and patching of servers, databases and application software for production and development environments.
- Specifies requirements for infrastructure components (virtual servers, vMemory, vCPU, storage, networking, databases, applications) to ensure performance, reliability, backup, and recovery (as defined for each system).
- Analyzes and resolves complex technical issues.
- Works with vendors to resolve problems.
- Provides vendors with enhancement requests.
- Creates scripted procedures and/or programming to automate support functions.
- Maintains security and staff access to servers, databases and/or software applications.
- Monitors performance, availability, reliability, and capacity of systems to meet defined Service Level Agreements (SLAs).
- Systems Administrator - configures, administers and maintains network servers providing file, print, application, web, and network services (DHCP, DCs, PXE, SAN, NAS, etc.).
- Systems Administrator - configures, administers and maintains host servers for virtual servers and assigns appropriate resources, vCPU, vMemory, vNetwork, vStorage, etc.
- Database Administrator - configures, administers and maintains databases, the DBMS and database servers providing database functions to application and web services.
- Database Administrator - configures, administers and maintains virtual database servers and assigns appropriate resources, vCPU, vMemory, vNetwork, vStorage, etc.
- Tracks and migrates Los Rios customizations and provides change management to the ERM.
- Works as a liaison between the business analysts and technical support to coordinate creation of and/or refreshes of test instances of the ERM.
- Ability to design, code and test scripts for the management of applications, servers and databases.
- Creates timelines and documentation as needed.
- Troubleshoots problems and consults with users for system needs, design, and operation.
- Provides assistance and direction to other Information Technology personnel.
- Maintains working knowledge of current industry information, vendor direction, new products, and technical architectures/approaches.

Projects:

- Participates in projects and provides task definitions and time estimates within assigned role.
- Performs project management for server, database and application software patch cycles and medium-sized projects.
- Manages on-going priorities, schedules, and task completions.

Organizational Support and Leadership:

- Attends vendor training (off-site or web-based).
- Communicates with other Information Technology technical staff.
- Assists and provides coverage for other technical personnel in similar roles.
- Maintains knowledge and provides advice in the business areas supported.

Strategy:

- Maintains working knowledge of current industry information, vendor direction, new products, and technical architectures/approaches related to department, College, and/or District needs.

- Researches vendor sites for technical information/updates, new product updates, and future trends within assigned area of responsibility.
- Participates in long-range Information Technology planning and budgeting within assigned area.
- Implements system architectures (server, database and software), policies, and procedures consistent with established plans.

Performs related duties as required.

Information Technology Systems/Database Administrator Analyst II: In addition to the typical duties of Information Technology Systems/Database Administrator Analyst I;

Operations (including security, performance, problem resolution, & budgets):

- Maintains and administers multiple servers, databases and major application software, across multiple major systems (different Operating Systems, different applications, databases, integration between systems, etc.).
- Performs major upgrades and regular patching of servers, databases and college-wide or district-wide application software for development and production within the assigned area of responsibility.
- Recommends changes for future consideration to improve security, performance, capacity, reliability, and cost benefit for systems with large numbers of users and critical reliability and performance.
- Defines and implements Disaster Recovery and Business Continuity plans for assigned systems and databases.
- Recommends and implements Service Level Agreements (SLAs) in conjunction with Information Technology Management, Senior Information Technology Analysts, and business units for critical College-wide and/or District-wide systems.
- Provides technical support for business and technical analysts.
- Systems Administrator - configures, administers and maintains clustered, failover, redundant network servers providing file, print, application, web, and network services (DHCP, DCs, PXE, SAN, NAS, etc.).
- Systems Administrator - configures, administers and maintains clustered, failover, redundant host servers for virtual servers and assigns appropriate resources, vCPU, vMemory, vNetwork, vStorage, etc.
- Database Administrator - configures, administers and maintains databases, the DBMS and database servers providing redundant, failover, high availability database functions to application and web services.
- Database Administrator - configures, administers and maintains virtual database servers providing redundant, failover, high availability and assigns appropriate resources, vCPU, vMemory, vNetwork, vStorage, etc.

Projects:

- Performs project management for server, database and application software upgrades and large-sized projects.

Organizational Support and Leadership:

- Assists and provides coverage for other Information Technology staff, sometimes in either technical or functional roles (database, systems, configuration management).
- Provides assistance and guidance to Information Technology Analyst I, when needed, on more difficult technical problems or project tasks.

Strategy:

- Recommends changes to system architectures (server, database and software), policies, and procedures consistent with established plans.

- Develops and implements plans for College-wide or major College systems architecture and Business units.

Performs related duties as required.

Senior Information Technology Systems/Database Analyst: In addition to the typical duties of Information Technology Systems/Database Administrator Analyst I and II;

Operations (including security, performance, problem resolution, & budgets):

- Administers and has over-sight for all or most District-wide servers, databases and application software for the most critical business functions and the largest user communities.
- Performs district-wide capacity planning for all or most District-wide servers, databases and critical application software.
- Consults with IT Management to ensure adequate capacity, performance, and security for all or most District-wide servers, databases and critical application software.
- Recommends and implements Service Level Agreements (SLAs) to define agreement between IT and business units or customers for the most critical business application software areas.
- Maintains knowledge of components outside of direct responsibilities and works with other IT units (application, database and infrastructure) to design and maintain overall security of systems and data.
- Designs and implements Disaster Recovery and Business Continuity plans for the most critical, District-wide business functions, consistent with IT Management and IT User community requirements.
- Manages analysis, application, and migration of patches and upgrades to the ERM (enterprise resource management system - PeopleSoft), both in test and production.

Projects:

- Performs project management for major server, database and application software upgrades of the most critical business systems.
- Projects typically include complex integration, involving large staffing across multiple technical layers and technical units, with significant user impact potential and risk avoidance.
- Monitors all ongoing projects of technical staff in the unit, to ensure consistency with technical direction.

Organizational Support and Leadership:

- Provides technical leadership to Analyst I & II in same specialties.
- Recommends and justifies relevant IT procedures & policies.
- Acts as a focal point for requests, problems, and issues affecting the unit.
- Leads the planning, design, and implementation of system architectures for broad, overlapping areas of technology.

Strategy:

- Analyzes and justifies changes and improvements in systems architecture (server, database and software) to Information Technology Management for the most critical systems and largest, District-wide applications.
- Leads long-range planning and budgeting for the most critical Information Technology systems (server, database and application software) and other related areas.

Performs related duties as required.

QUALIFICATIONS

EDUCATION/EXPERIENCE

Information Technology Systems/Database Administrator Analyst I: A Bachelor's degree in computer sciences, management information systems, engineering or closely related field and two years' experience directly related to job duties; OR, a Bachelor's degree and four years' experience directly related to the job duties; OR, an Associate's degree in computer sciences or a closely related field and six years' experience directly related to job duties.

Information Technology Systems/Database Administrator Analyst II: A Bachelor's degree in computer sciences, management information systems, engineering or a closely related field and four years' experience directly related to job duties; OR, a Bachelor's degree and two years in class of Information Technology Analyst I; OR, a Bachelor's degree and six years' experience directly related to job duties; OR, an Associate's degree in computer sciences or a closely related field and eight years' experience directly related to the job duties.

Senior Information Technology Systems/Database Administrator Analyst: A Bachelor's degree in computer sciences, management information systems, engineering or closely related field and six years' experience directly related to job duties; OR, a Bachelor's degree and two years in class of Information Technology Analyst II; OR, a Bachelor's degree and eight years' experience directly related to job duties.

KNOWLEDGE OF

Information Technology Analyst I, II and Senior Information Technology Analyst (Systems/Database Administrator):

Knowledge of software systems development life cycle; computer operating systems, hardware, network systems, and telecommunications; and LAN and Internet computing technologies. Knowledge of business, administrative and instructional system applications; effective customer service; and project management, procurement, and contract management. Knowledge of information system problem management and change management; configuration and version control of information system components; and system, user, and architecture documentation. Knowledge of business recovery (disaster recovery); technical problem solving; and methods of long-term strategic technical planning. Knowledge of current industry information, vendor direction, new products, and new technical architectures; and multi-media presentation tools. Knowledge of software licensing, intellectual property rights, and copyright law.

Information Technology Analyst I, II and Senior Information Technology Analyst (Systems Administrator):

Knowledge of software systems development life cycle; computer operating systems, hardware, network systems, and telecommunications; and LAN and Internet computing technologies. Knowledge of business, administrative, and instructional system applications; effective customer service; and project management, procurement, and contract management. Knowledge of information system problem management and change management; configuration and version control of information system components; and system, user, and architecture documentation. Knowledge of business recovery (disaster recovery); technical problem solving; and methods of long-term strategic technical planning. Knowledge of current industry information, vendor direction, new products, and new technical architectures; and multi-media presentation tools. Knowledge of software licensing, intellectual property rights, and copyright law. Knowledge of IT industry practices, guidelines, and technical standards for system administration; computer operating system internals, commands, operations, and utilities; and; installation and administration of medium to large-scale computing systems. Knowledge of team dynamics and workgroup interaction; computing system hardware and software maintenance and

diagnostic procedures and techniques; and installation, configuration, and support of peripheral systems and network-based system components. Knowledge of system, application, and network security technologies, procedures, and practices.

Senior Information Technology Analyst (Systems Administrator): Knowledge of team building; business analyst functions; business and instructional systems analysis; and business and instructional planning processes. Knowledge of statistical, cost benefit, impact, workflow, and data analysis; service administration practices and development of service level agreements; and user acceptance testing. Knowledge of creation and evaluation of Request for Bids; creation and presentation of information system service proposals; effective leadership methods; organizational processes, practices, and policies; and team dynamics and team building methods. Knowledge of distributed printing subsystems; fault-tolerant, clustering and replication; and storage area networks. Knowledge of RAID and data archival subsystems; centralized backup and tape management systems; and centralized system monitoring and management systems.

Information Technology Analyst I, II and Senior Information Technology Analyst (Database Administrator): Knowledge of software systems development life cycle; computer operating systems, hardware, network systems, and telecommunications; and LAN and Internet computing technologies. Knowledge of business, administrative, and instructional system applications; effective customer service; and project management, procurement, and contract management. Knowledge of information system problem management and change management; configuration and version control of information system components; and system, user, and architecture documentation. Knowledge of business recovery (disaster recovery); technical problem solving; and methods of long-term strategic technical planning. Knowledge of current industry information, vendor direction, new products, and new technical architectures; and multi-media presentation tools. Knowledge of software licensing, intellectual property rights, and copyright law. Knowledge of database administration, design techniques, characteristics, capabilities, operation, control, and security methods and techniques; physical control standards and procedures; database CASE tools, operational, and migration support tools.

Senior Information Technology Analyst (Database Administrator): Knowledge of enterprise database management system (DBMS) architectures. Knowledge of principles and practices for design, integration, and transition to/from an enterprise DBMS. Knowledge of telecommunications and network systems; team dynamics, team building, and workgroup interaction. Knowledge of business analyst functions; business and instructional systems analysis; and business and instructional planning processes. Knowledge of statistical, cost benefit, impact, workflow, and data analysis; service administration practices and development of service level agreements; and user acceptance testing. Knowledge of creation and evaluation of Request for Bids; creation and presentation of information system service proposals; effective leadership methods; organizational processes, practices and policies; and team dynamics and team building methods. Knowledge of distributed printing subsystems; fault-tolerant, clustering and replication; and storage area networks. Knowledge of RAID and data archival subsystems; centralized backup and tape management systems; and centralized system monitoring and management systems.

SKILLS IN

Information Technology Analyst I, II and Senior Information Technology Analyst: Skill in developing an image of how a system should work under ideal conditions; generating a number of different approaches to problems; determining the long-term outcomes of a change in operations; reorganizing information to get a better approach to problems or tasks; and evaluating the likely success of an idea in relation to the demands of the situation. Skill in understanding written sentences and

paragraphs in work related documents; communicating effectively with others orally and in writing as indicated by the needs of the audience; finding ways to structure or classify multiple pieces of information; and listening to what other people are saying and asking questions as appropriate.

ABILITY TO (ESSENTIAL FUNCTIONS)

Information Technology Analyst I & II: The ability to perform the basic (Analyst I) and advanced (Analyst II) functions of the position; sustain regular work attendance; work cooperatively and effectively with the public, students, faculty, and staff; exercise initiative and mature judgment; work as a member of a team; and meet schedules and time lines. The ability to learn and adapt to new technologies, procedures, and policies; work independently with minimum supervision; and plan, organize, prioritize, and complete the workload of assigned areas of responsibility. The ability to perform individual research, analysis, and evaluation of systems and programs; develop and present technical briefings and specifications; and develop, coordinate, and enforce organization-wide information systems standards. The ability to collect and analyze data utilizing computer applications as appropriate; and prepare written and verbal reports on findings.

Senior Information Technology Analyst: The ability to perform the most complex functions of the position; sustain regular work attendance; work cooperatively and effectively with the public, students, faculty, and staff; exercise initiative and mature judgment; work as a member of a team; and develop, communicate, and meet schedules and time lines. The ability to learn and lead implementation efforts related to new technologies, procedures, and policies; develop and maintain enterprise systems exhibiting high availability, good performance, and providing reliable information; and work independently with no supervision. The ability to assume accountability for all responsible systems and programs; plan, organize, prioritize, and complete the workload of assigned areas of responsibility; and develop and present technical briefings and specifications. The ability to perform individual research, analysis, and evaluation of IT systems, programs, and services; plan, organize, and manage enterprise-wide systems standards; organize tasks and meetings resulting in timely and effective completion of projects; and articulate business and systems requirements to management, experts, and vendors.

TYPICAL EQUIPMENT USED (May include, but not limited to)

Current office technologies, including computers, scanners, printers, copiers, and servers.