

State of South Carolina ITMO Vendor Management Program IT Staffing Job Titles/Descriptions

SYSTEM/APPLICATION ANALYST

Function:

Under general supervision participates in the analysis, design, programming, and implementation of computer systems; works independently or as a part of a team under general supervision. May be needed to coach junior technical staff.

General Characteristics:

- Responsible for the design and development of the enterprise IT systems.
- Working knowledge of computer programming languages for mainframe, client/server, PC and/or Web application development.
- Working knowledge of methods and techniques of computer programming including system development life cycles and software testing.
- Working knowledge and experience with databases and database management.
- Develops design and functional specifications, produces deliverables related to the project(s) assigned and assists in post implementation support and system enhancements.
- Responsible for gathering, compiling and synthesizing information with regard to technology processes or systems.
- Ability to deal effectively with the needs of the data processing installation, vendors, business users and IT staff members.
- Ability to plan, organizes, instruct, and review the work of technical professional services.
- Ability to write and speak in a clear and concise manner.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field

DATA ARCHITECT

Function:

Technical expert in IT organization; coaches and mentors more junior technical staff; provides input into highly complex and high impacting decision as it relates to area of expertise.

General Characteristics

- Responsible for enterprise-wide data design, balancing optimization of data access with batch loading and resource utilization factors.

- Knowledgeable in most aspects of designing and constructing data architectures, operational data stores, and data marts.
- Focuses on enterprise-wide data modeling and database design.
- Defines data architecture standards, policies and procedures for the organization, structure, attributes and nomenclature of data elements, and applies accepted data content standards to technology projects.
- Responsible for business analysis, data acquisition and access analysis and design, Database Management Systems optimization, recovery strategy and load strategy design and implementation.

Education:

Bachelor's or Master's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

DATA BASE ADMINISTRATORS

Database Administrator – Level I

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Manages and maintains all production and non-production databases.
- Responsible for standards and design of physical data storage, maintenance, access and security administration.
- Performs backup and recovery on Database Management Systems, configures database parameters and prototype designs against logical data models, and defines data repository requirements, data dictionaries and warehousing requirements.
- This position optimizes database access and allocates/re-allocates database resources for optimum configuration, database performance and cost.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

Database Administrator – Level II

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Manages and maintains all production and non-production databases.

- Responsible for standards and design of physical data storage, maintenance, access and security administration.
- Performs backup and recovery on Database Management Systems, configures database parameters and prototype designs against logical data models, and defines data repository requirements, data dictionaries and warehousing requirements.
- This position optimizes database access and allocates/re-allocates database resources for optimum configuration, database performance and cost.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

Database Administrator – Level III

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Manages and maintains all production and non-production databases.
- Responsible for standards and design of physical data storage, maintenance, access and security administration.
- Performs backup and recovery on Database Management Systems, configures database parameters and prototype designs against logical data models, and defines data repository requirements, data dictionaries and warehousing requirements.
- This position optimizes database access and allocates/re-allocates database resources for optimum configuration, database performance and cost.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

CLIENT TECHNOLOGIES TECHNICIAN

Function:

Acts under direct supervision, generally following documented procedures and checklists.

General Characteristics

- Configures and installs software for IT users' desktops and laptops. Involved in the installation and rollout of new software packages, upgrades and new desktop hardware.
- Maintains desktop software and hardware; supports mobile workforce.
- Provides support to IT users for basic software and hardware of end-user computing and desktop-based LAN systems.

- Troubleshoots problems using scripts and checklists as guides.
- Provides highest level of technical support when necessary.
- Documents problems and resolutions.
- May perform end-user training.
- Strong customer service skills are important in this position.
- Participates in the testing and evaluation of new desktop packages and implements prototypes.

Education:

Associate or Bachelor's Degree, or technical institute degree/certificate, or equivalent work experience.

NETWORK ENGINEER

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Assists in the planning, forecasting, implementation, and identification of resource requirements for network systems (including wireless) of moderate complexity.
- Participates in network planning, network architecture design and engineering.
- Integrates and schematically depicts communication architectures, topologies, hardware, software, transmission and signaling links and protocols into complete network configurations.
- Evaluates new products, performs network problem resolution and assists in the development and documentation of technical standards and interface applications.
- Monitors protocol compatibility, performs system tuning, and makes recommendations for improvement.
- Ability to lift moderately heavy objects (e.g. computers, monitors, printers).

Education: Bachelor's Degree in Computer Science, Information Systems, or other related field or certification in one of the following: Certified Network Engineer, Microsoft Certified Systems Engineer, IBM Certified Networking Solutions Engineer, etc.

NETWORK ADMINISTRATOR

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Monitors, troubleshoots and maintains network (LAN, WAN and wireless) multiplexers, hubs and routers, and uses remote monitoring tools.
- The duties of this position can be broad and may include such tasks as installing new workstations and other devices, adding and removing individuals from the list of authorized users, archiving files, overseeing password protection and other security measures, monitoring usage of shared resources, and handling malfunctioning equipment. Selects, develops, integrates and implements network management applications for Internet components.

Education:

Bachelor's Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field, or equivalent work experience.

NETWORK TECHNICIAN

Function:

Acts under consistent and direct supervision, generally following documented procedures and checklists.

General Characteristics

- Provides daily operations support and maintenance for network systems (including wireless).
- Proactively monitors networks to provide stable, dependable network services across multiple platforms.
- Configures and troubleshoots computer networks.
- Maintains LAN/WAN/wireless operations by working with network facility and hardware/software vendors to ensure timely problem resolution.
- Maintains and utilizes network management applications to identify network faults, to ensure the provision of data or other telecommunications access to customers, and the movement of information from one location to the other.

Education:

Associate's or Bachelor's Degree, or technical institute degree/certificate in Computer Science, Information Systems, or other related field. Or equivalent work experience.

INTERNET/WEB ENGINEER

Function:

Works under general supervision and participates in the design and development of internet/intranet systems. May work independently or as a part of a team. May serve as senior technical staff member for assigned projects. May coach more junior technical staff.

General Characteristics

- Integrally involved in the development and support of all Internet/Intranet/Extranet sites and supporting systems.
- Works closely with other IT groups and customers to define the system design and user interface based on customer needs and objectives.
- Participates in all phases of the development and implementation process, and may act as a project manager on special projects.
- Ensures the integration of the web servers and all other supporting systems by using message based middleware and interfacing with relational databases.
- Be knowledgeable of best-practices for building secure web applications.
- Responsible for developing client-side scripting and server-side application code.
- Extensive knowledge in using programming languages such as Visual Basic, HTML, XML, Java, and ASP.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

WEB DESIGNERS

Function:

Works under general supervision provides design, development of user-centered webpage layouts and graphic elements for web sites. May work independently or as a part of a team. May serve as senior technical staff member for assigned projects. May coach more junior technical staff.

General Characteristics:

- Responsible for the design, development of user-centered designs for web sites.
- Responsibilities include human factors engineering, heuristic evaluations, and usability testing for web and client based applications as well as metrics setting and monitoring designed to assess the usability of the web application. Works to improve the usability, usefulness, and desirability of web sites in collaboration with Graphic Designers, Product Managers, Engineering Staff, and other Web Designers. Must be able to perform usability tests, provide design prototypes, and provide ad hoc user interface consulting.

- Responsible for requirements gathering and articulation of user interface issues - including development of page/site prototypes. Must be knowledgeable of user-centered design methodology, user scenarios, usability testing, storyboarding, paper and interactive prototypes.
- Must have demonstrated skills in graphic applications, HTML development tools and other applicable authoring tools.
- Must have demonstrated skills in graphic applications, HTML development tools and other applicable authoring tools.
- Knowledgeable in web production, front-end development using programming and scripting languages.
- Knowledgeable in webpage layout tools; graphic editors; graphic animation tools.
- Must be able to integrate design into program rules and system architecture and create innovative approaches to improving the end-user experience.
- Must be familiar with platform/browser compatibility and basic usability issues.

Education and Experience:

A Bachelor's Degree in Computer Science, Information Systems, Graphic Design, or other related field, or equivalent work experience and two years combined IT and graphic design experience; or associate degree in computer based graphics and three to five years experience in Web Graphics design.

COMPUTER OPERATOR

Function:

Acts under consistent and direct supervision, generally following documented procedures and checklists

General Characteristics

- Responsible for monitoring multi-technology computing platforms including midrange platforms, mainframes and/or servers.
- Responsible for ensuring a stable operating environment and attaining maximum utilization of system facilities.
- Operates and monitors console systems and peripheral equipment such as printers, disk drives and tape readers.
- Troubleshoots and restores routine technical service and peripheral equipment, schedules production runs, performs system backup process, disaster recovery tests, loads tapes, disks and paper as needed.
- Assists programmers and systems analysts in running jobs that are used for testing and debugging new programs.

Education:

Associate's or Bachelor's Degree or technical institute degree/certificate in Computer Science, Information Systems, or other related field, or equivalent work experience.

TECHNICAL TRAINER

Function:

Works independently or as a part of a team under general supervision. May coach more junior staff.

General Characteristics

- Responsible for the creation and delivery of training and development programs to all levels of end-users and IT professionals.
- Involved in training needs assessment process and vendor selection.
- Works closely with both IT and the business to understand system and training needs for applications and packages supported.
- Develops documentation for custom applications and packaged applications, using a variety of mediums as needed.
- Designs training programs, classes, workshops, and Computer Based Training (CBT), and on-line help.
- Delivers training to a variety of audiences, understanding and applying adult learning principles. More junior position works on and delivers training programs for standard packages and productivity tools (e.g., Word, Excel, e-mail). More senior position delivers technical training to IT professionals, and requires in-depth knowledge and experience in the systems/applications/ programming languages supported (e.g., Oracle, NT, C++).

Education:

Bachelor's Degree in Instructional Technology, Computer Science, Information Systems, Education, or other related field, or equivalent work experience.

SECURITY ANALYST

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Develops and manages security for more than one IT functional area (e.g., data, systems, network and/or web) across the enterprise.
- Assists in the development and implementation of security policies and procedures (e.g., user log-on and authentication rules, security breach escalation procedures, security auditing procedures, and use of firewalls and encryption routines).
- Prepares status reports on security matters to develop security risk analysis scenarios and response procedures.
- Responsible for the tracking and monitoring of software viruses.
- Enforces security policies and procedures by administering and monitoring security profiles, reviews security violation reports and investigates possible security exceptions, updates, and maintains and documents security controls.
- Involved in the evaluation of products and/or procedures to enhance productivity and effectiveness.

- Provides direct support to the business and IT staff for security related issues.
- Educates IT and the business about security policies and consults on security issues regarding user built/managed systems.
- Represents the security needs of the organization by providing expertise and assistance in all IT projects with regards to security issues.
- Must have extensive knowledge in networking, databases, systems and/or web operations.
- More junior position primarily focuses on security administration; more senior position is involved in developing enterprise security strategies, management of security projects, and the most complicated security issues.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

SYSTEMS SOFTWARE PROGRAMMER

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics

- Responsible for the analysis, development, modification, installation, testing and maintenance of operating systems software.
- Possesses a strong understanding of systems programming, graphical user interfaces and control languages.
- Evaluates vendor supplied software packages and makes recommendations to IT management.
- Modifies and/or debugs vendor-supplied utilities and packages.
- Modifies, installs and prepares technical documentation for system software applications.
- Diagnoses, isolates and de-bugs software problems and performs problem resolution.
- Monitors systems capacity and performance, plans and executes disaster recovery procedures and provides Tier II technical support.

Education:

Bachelor's Degree in Computer Science, Information Systems, or other related field, or equivalent work experience.

BUSINESS ANALYST

Function:

Works independently or as a part of a team under general supervision. May coach more junior technical staff.

General Characteristics:

- Serves as a liaison between the business community and the IT organization in order to provide technical solutions to meet user needs.
- Possesses expertise in the business unit(s) they support, as well as, an understanding of the IT organization's systems and capabilities.
- Analyzes business partner's operations to understand their strengths and weaknesses to determine opportunities to automate processes and functions.
- Assists in the business process redesign and documentation as needed for new technology.
- Translates high level business requirements into functional specifications for the IT organization and manages changes to such specifications.
- Educates the IT organization on the direction of the business. Negotiates agreements and commitments by facilitating communication between business unit(s) and IT from initial requirements to final implementation.
- Possesses an understanding of technological trends and uses this knowledge to bring solutions to business units supported to enhance the enterprise's competitive edge.
- May make recommendations for "buy vs. build" decision.

Education:

Bachelor's Degree in Computer Science, Information Systems, Business Administration, or other related field, or equivalent work experience.