

Appendix B - Job Titles and Skill Categories

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Application Developer

The Application Developer will provide support to existing production applications and perform complex technical analysis, design, development, documentation, testing, deployment and implementation of new applications using existing and emerging platforms. This category includes web application and database development.

Application Developer 1 (AD1)

Years of Relevant Experience:	Up to 3years industry experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Reviews and understands the Application Team’s work plan. • Provides status of work to Team Lead. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team. • Develops contingency plans as necessary. • Engages in ongoing process improvement. • Detailed functional and process knowledge. • Utilizes deep modeling, design and coding skills. • Provides expertise in one or more database environments.

Application Developer 2 (AD2)

Years of Relevant Experience:	3 to 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD1 plus the following:</p> <ul style="list-style-type: none"> • This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team • Supports team in modification of enhancements and changes to applications. • Leverages excellent written and verbal communication skills May coordinate activities of other application developers • Supports business process, problem analysis and consultation. • Processes open defect/maintenance tickets and correct technical errors.

Application Developer 3 (AD3)

Years of Relevant Experience:	More than 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD2 plus the following:</p> <ul style="list-style-type: none"> • Proven track record of hands-on technical design and code work within large complex systems. • Proven hands-on technical work with a variety of technologies. • Able to make best practice recommendations based on past work. • Proven ability to present complex technical constructs to business and non-technical users. • Proven ability to collaborate with business users, project managers and technical architects.

Architect

The Architect has the ability to design, develop, and implement application infrastructure to provide reliable and scalable applications and systems to meet the organization’s objectives and requirements. The Architect is familiar with a variety of the application technologies,

environments, concepts, methodologies, practices, and procedures. The Architect is also able to perform a variety of complicated tasks with minimal or no direct supervision. The Architect is experienced in defining systems and application architecture.

Architect (ARI)

Years of Relevant Experience:	Up to 5 years software development and testing
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> • Proven experience with hands-on technical development work. • Able to coordinate with technical leads, business users and project managers. • Experience participating in development of standards and product recommendations. • Experience designing and architecting systems as a member of a design team. • Experience working through every phase of software development life cycle. • Strong verbal communication.

Business Analyst

The Business Analyst is responsible for the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

Business Analyst (BAI)

Years of Relevant Experience:	Up to 4 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	<ul style="list-style-type: none"> • Experience conducting Facilitated Workshops for requirements analysis. • Experience creating workflows using formal notation such as the Business Process Modeling Notation (BPMN). • Knowledge of formal requirements gathering methodologies. • Experience developing Business Requirements - project initiation document, what the needed achievements will be, and the quality measures. • Experience developing Functional requirements - describe what the system, process, or product/service must do in order to fulfill the business requirements. • Experience developing User (stakeholder) requirements - are a very important part of the deliverables, the needs of the stakeholders will have to be correctly interpreted. This deliverable can also reflect how the product will be designed, developed, and define how test cases must be formulated. • Experience developing Quality-of-service (non-functional) requirements - re requirements that do not perform a specific function for the business requirement but are needed to support the functionality. For example: performance, scalability, quality of service (QoS), security and usability. • Experience developing Report Specifications - define the purpose of a report, its justification, attributes and columns, owners and runtime parameters. • Experience developing Requirements Traceability Matrix - a cross matrix for recording the requirements through each stage of the requirements gathering process. • Strong organization and writing skills. Experienced developing graphic

	representations of complex business processes.
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Business Analyst (BA2)

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	All roles specified in BA1 plus additional work experience and job knowledge.

Business Analyst (BA3)

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent and IIBA-certified Business Analyst.
Role Description:	All roles specified in BA2 plus IIBA certification.

CADD/GIS Administrator

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

CADD/GIS Administrator (CGA1)

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Assists in troubleshooting CADD/GIS system hardware problems and works with the appropriate service and warranty vendors to make the necessary repairs and fixes. • Tracks version upgrades and notifies proper parties of available updates to CADD/GIS Systems software. • Assists with phone and online problem reporting and maintaining problem report records. • Assists with ordering consumable supplies for the CADD/GIS Systems. • Maintains current inventory of all hardware, software, upgrades and fixes for each site. • Maintains configuration charts of current inventory. • Maintains data backups and data archives and provides data retrieval from backup. • Monitors system status and data integrity.

CADD/GIS Administrator (CGA2)

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> • Able to work independently. • Demonstrates proven experience in troubleshooting with little supervision. • Able to communicate status to managers and project sponsors. • Assists in developing standards and direction for systems.

CADD/GIS Administrator (CGA3)

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> • Leads efforts to troubleshoot CADD/GIS system hardware and software problems. • Leads team of CGAs developing software and hardware plans and

	solutions. <ul style="list-style-type: none"> • Expertise in teaching/conveying technical and/or functional courses/concepts.
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Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

Data Entry Operator (DE1)

Years of Relevant Experience:	Up to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> • Comprehensive PC skills. • Able to follow written and spoken instructions. • Minimum of 25 wpm. • Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen. • Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform. • Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques. • Able to conduct basic data mining and data capture efforts. • Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP. • Key punch and verify records in specified format (ex. ASCII). • The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeroes are not counted as keystrokes. • The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession. • Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis. • Pickup and delivery by contractor to be made on a weekly basis. • For key entry, required that a second individual completed 100% key verification to control errors. • Knowledge of imaging and visual display operating practices, procedures, and techniques. • Knowledge of arithmetic and numbering systems. • Able to operate equipment with speed and accuracy to ensure information is captured.

Data Entry Operator (DE2)

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> • Comprehensive PC skills. • Able to follow written and spoken instructions. • Minimum of 35 wpm. • Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen. • Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform. • Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques. • Able to conduct basic data mining and data capture efforts.

	<ul style="list-style-type: none"> • Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP. • Key punch and verify records in specified format (ex. ASCII). • The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeroes are not counted as keystrokes. • The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession. • Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis. • Pickup and delivery by contractor to be made on a weekly basis. • For key entry, required that a second individual completed 100% key verification to control errors. • Knowledge of imaging and visual display operating practices, procedures, and techniques. • Knowledge of arithmetic and numbering systems. • Able to operate equipment with speed and accuracy to ensure information is captured.
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Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

Database Administrator (DBA1)

Years of Relevant Experience:	Up to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Skilled data dictionary analysis and design and data model analysis design. • Maintains central data repository. • Experience and knowledge in supporting application system development life cycle. • Responsible for data dictionary backup and recovery. • Responsible for definition of standards of data dictionaries. • May program dictionary analysis and maintenance software. • Performs performance tuning. • Monitors database performance and space requirements. • Schedules and monitors end of day data warehousing jobs. • Assists in coordinating software releases. • Communicates accurate and useful status updates. • Manages and reports time spent on all work activities. • Follow quality standards. • Able to work in a team environment. • Complete assigned tasks. • Strong communication skills; both written and spoken.

Database Administrator (DBA2)

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study

Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> • Business systems analysis and design experience. • Logical data modeling techniques. • Production environment Tools/Utilities. • Knowledgeable in data analysis and database management techniques. • Execution of all responsibilities with little direct supervision of Team Lead. • Administration and scripting experience in relative platform. • Supervise performance tuning. • Author shell scripts to perform back up, restore, and monitoring tasks. • Anticipate and resolve issues specific to the team. • Determine time estimates and schedule for own work and resolve issues in a timely manner. • Identify and track issues, risks and action items.
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Database Administrator (DBA3)

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA2 plus the following:</p> <ul style="list-style-type: none"> • Highly skilled at database design, installations, conversions. • Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.

Database Administrator (DBA4)

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA3 plus the following:</p> <ul style="list-style-type: none"> • Participates in Database Management System selection and maintains database performance. • Knowledge of various Database Management System products. • Provides status of work to Project Team Lead. • Engages in ongoing process improvement.

Functional Architect

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

Functional Architect (FAI)

Years of Relevant Experience:	2 to 4 years in particular application area
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Experience:	
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Analyzes, determines, and documents functional requirements. • Provides definition on how the applications will support business requirements. • Conducts impact analyses of business requirements on the system. • Works with Technical Architecture Specialist in defining software/hardware requirements. • Gathers and interprets user requirements into design specifications. • Participates in design of application. • Participates in design code and test reviews as appropriate. • Provides inputs to test planning. • Completes assigned tasks. • Communicates accurate and useful status updates. • Follows quality standards. • Able to work in a team environment. • Strong communication skills; both written and spoken • Acts as the application(s) functional expert; providing expertise in the business process supported by the application. • Provides detailed definition on how the applications will support business requirements. • Works with Technical Architecture Specialist in planning and delivering technical architecture. • Provides expertise for defining functional architecture and infrastructure for applications. • Plans and develops user interface strategy. • Directs and participates in design of application. • Interprets and understands user requirements/design specifications. • Provides detailed definition on how the applications will support business requirements. • Works with Technical Architecture Specialist in defining software/hardware requirements and in planning and delivering architecture. • Provides expertise for defining architecture and infrastructure for applications. • Reviews and understands team work plan • Identifies and tracks issues, risks and action items affecting own work and work of team. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner.

Functional Architect (FA2)

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> • Provides functional expertise to planning organization as required. • Reviews tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect. • Coordinates the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes. • Organizes and prepares work effectively to facilitate proactive resolution of problems. • Works with client and Lead Functional Architect to identify direction of

	<p>software.</p> <ul style="list-style-type: none"> • Ensures business requirements are supported by the software. • Identifies and initiates continuous improvement opportunities. • Defines user interface strategies. • Understands specific business needs and overall business strategy of the business customer.
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Functional Architect (FA3)

Years of Relevant Experience:	Five plus years in particular application area
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in FA2 plus the following:</p> <ul style="list-style-type: none"> • Guides processes for Functional Architects and direct work planning and design activities. • Provides standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria. • Ensures that overall application designs remain within project scope. • Works with customer business units to understand their business processes. • Works with customer business units and client to identify direction of software. • Ensures business requirements are supported by the software. • Ensures goals for Functional Architects are being met and manage team commitments. • Analyzes, defines, and documents how the applications will support functional and business requirements. • Coordinates these efforts with Functional Architects. • Understands supporting/interfacing system applications. • Approves the determined need for new software/hardware. • Understands prioritization work based on business needs request/releases for work affecting an application. • Manages the accomplishment of delivery metrics, Service Level Agreements and other contractual obligations within areas of responsibility. • Sponsors coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals. • Coordinates and conducts project review meetings with Group Lead Functional Architects and Team Leads. • Communicates and resolves application interface issues with other Lead Functional Architects as needed. • Monitors and measures maintenance and development process effectiveness. • Communicates clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects. • Communicates to team members the relationships between their work and assignments and the organizational and/ or program objectives.

Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

Help Desk Analyst (HDA1)

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Provides technical assistance, support, and advice to end users for

	<p>hardware, software, and systems.</p> <ul style="list-style-type: none"> • Provides hands-on technical assistance to business and technical users. • Investigates and resolves computer software and hardware problems of users. • Serves as a contact for level 1 support. • Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary. • Determines whether problem is caused by hardware, software, or system. • Answers questions, applying knowledge of computer software, hardware, systems, and procedures. • Talks with technical and non-technical co-workers to research problem and find solution. • Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions. • Experienced with a variety of call-tracking software and systems. • Reads trade magazines and engages in independent study to maintain current industry knowledge. • Follow quality standards, and displays strong customer service skills. • Able to work in a team environment. • Complete assigned tasks. • Strong communication skills; both written and spoken.
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Help Desk Analyst (HDA2)

Years of Relevant Experience:	3 to 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	<p>All roles specified in HDA 1 plus the following:</p> <ul style="list-style-type: none"> • Calls software and hardware vendors to request service regarding defective products. • Acts as a subject matter expert for one or more custom or COTS applications. • Talks to programmers to explain software errors or to recommend changes to programs. • May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied. • Tests software and hardware to evaluate ease of use and whether product will aid user in performing work. • Write software and hardware evaluation and recommendations for management review. • Write or revise user-training manuals and procedures. • Develops training materials, such as exercises and visual displays. • Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.

Help Desk Analyst (HDA3)

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	<p>All roles specified in HDA 1 and 2 plus the following:</p> <ul style="list-style-type: none"> • Manage expectations at all levels: customers/end users, executive sponsors. • Ensure quality standards are followed. • Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.

	<ul style="list-style-type: none"> • Act as the escalation point for high priority support issues. • Able to make recommendations on policies on system use and services.
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Intern

The Intern will assist team members with daily responsibilities as directed by his or her supervisor. Interns are not recruited through the standard Staff Augmentation process. They are recruited by the Technology Council of Central Pennsylvania through their TechQuest program, and selected by the agency.

Intern (INT1)

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> • Able to perform tasks as assigned by the direct supervisor. • Able to keep team members and supervisor apprised of work status and attendance. • Basic computer knowledge. • Additional requirements may need to be met, depending on opportunity.

Intern (INT2)

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> • Able to develop organizational and communication skills. • Able to keep team members and supervisor apprised of work status and attendance. • Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development. • Must show willingness and ability to develop IT-related technical skills. • Additional requirements may need to be met, depending on opportunity.

Intern (INT3)

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> • Able to develop organizational and communication skills. • Able to keep team members and supervisor apprised of work status and attendance. • Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development. • Must show willingness and ability to develop IT-related technical skills. • Must show willingness and ability to develop an understanding of IT-related technologies and concepts. • Additional requirements may need to be met, depending on opportunity.

Mobile Specialist

The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Development, Security, and/or Infrastructure Projects. The Mobile Specialist participates in project planning and in the creation and review of technical deliverables. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist (MS1)

Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Serves as the Designer, Developer and/or Engineer on Mobile Projects. • Meets with end users and technical staff of all types to gather business and system requirements • May work with Mobile Specialist 2 to propose comprehensive solutions based on business and technical requirements • Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects.

	<ul style="list-style-type: none"> • Develops standards, repeatable processes, and reusable components • Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources. • Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity. • Assists in the development and review of technical deliverables on projects.
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Mobile Specialist (MS2)

Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Serves as the Lead Architect/Designer/Developer /Engineer on Mobile Projects. • Meets with end users and technical staff of all types to gather business and system requirements. • Proposes comprehensive solutions based on business and technical requirements • Architects, designs, develops, and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. • Develops standards, repeatable processes, and reusable components • Leads project planning, including developing of timelines, composition of technical teams, and leveling of resources. • Mentors and manages technical team leads and team members on Department processes and standards to promote consistency and improve productivity. • Leads the development and review of technical deliverables on projects.

Network Engineer

The Network Engineer is involved in the design and maintenance of both the hardware and software necessary for a computer network. The Network Engineer is a high-level technical analyst, specializing in Local Area Networks (LANs)/Wide Area Networks (WANs), TCP/IP, and server/network infrastructure.

Network Engineer (NE1)

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Responsible for the installation, configuration and administration of network routers and switches. • Executes the disaster recovery/back up procedures and archiving procedures. • Manages security for servers. • Responsible for performance tuning, capacity planning, database administration, and fault management. • Coordinates efforts with vendors • Responsible for ensuring high priority issues are resolved in a timely manner. • Responsible for keeping the environment up and running. • Often times, responsible for identifying and reporting hardware problems. • Understands basic routing concepts. • Identifies and track issues, risks, and action items. • Resolves and/or assists in resolving issues. • Reviews, prioritizes, and researches service requests. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner.

Network Engineer (NE2)

Years of Relevant Experience:	3 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in NE1 plus the following: <ul style="list-style-type: none">• Solid understanding of networking/distributed computing environment concepts.• Understands principles of routing client/server programming.• Manages expectations at all levels: customers/end users, executive sponsors.• Ensures quality standards are followed.• Understands the business application of technical support and design in an application development environment.• Develops plans for disaster recovery/ back up and archiving.• Manages the daily operations of the systems management team to ensure service levels are being met.• Manages the systems management team's support issue and backlog.• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.• Acts as the first level of escalation for high priority support issues.

Network Engineer (NE3)

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in NE2 plus the following: <ul style="list-style-type: none">• Functions as the liaison to the various support groups with whom the systems management team interfaces.• Develops the technical infrastructure maintenance strategy.• Analyzes, determines and documents requirements in terms of system management needs and implements them.

Product Specialist

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc.) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

Product Specialist (PS1)

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none">• Makes sound recommendations on functional and technical improvements to the product.• Analyzes the functional and technical impact of product planning

	<p>decisions.</p> <ul style="list-style-type: none"> • Develops appropriate functional and usability standards for products. • Tracks and document expected volume and type of use of the product. • Participates in product design reviews to verify that design meets quality standards and functional/technical requirements. • Performs impact analyses on production fixes and enhancements to establish priorities. • Provides basic product support and provide accurate and complete answers to detailed product questions in a timely manner. • Provides effective on-site product support as needed. • Accurately sets severity of identified defects. • Provides input to training and / or documentation materials regarding latest technical and functional design changes. • Documents all work for future reference. • Reviews the system test approach and conditions used as the basis for detailed test scenarios. • Follows quality standards. • Analytical and customer service skills. • Communicates accurate and useful status updates. • Able to work in a team environment. • Completes assigned tasks. • Strong communication skills; both written and spoken.
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Product Specialist (PS2)

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> • Actively contributes as an expert or actual designer. • Coordinates product design reviews to verify that design meets quality standards and functional/technical requirements. • Provides accurate estimates for design and programming efforts for system changes and enhancements. • Coordinates enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model. • Confirms that technical architecture will support all changes required by product enhancements. • Effectively leads product tests and trials. • Identifies appropriate business examples to illustrate key concepts / features. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team. • Develops contingency plans as necessary. • Applies specific expertise to ensure that products meet defined customer objectives. • Anticipates and resolve issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks and action items.

Product Specialist (PS3)

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> • Demonstrates expertise in teaching/conveying technical and/or functional

	courses/concepts. <ul style="list-style-type: none"> • Develops appropriate work programs/budgets and use to effectively schedule tasks/assignments. • Identifies improvements to project standards to achieve high quality services/products.
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Product Specialist (PS4)

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS3 plus the following: <ul style="list-style-type: none"> • Delivers support and design for industry specific applications that require integration with statewide systems or applications. • Interacts with executive level business users or technical experts. • May function as a niche SME.

Product Specialist (PS5)

Years of Relevant Experience:	9 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS4 plus the following: <ul style="list-style-type: none"> • Responsible for functioning as the Technical SME on an enterprise-wide system. • Responsible for implementations of products/services that involve significant Commonwealth and federal oversight. • Provides direct technical expertise to Executive applications involving national security.

Product Specialist (PS6)

Years of Relevant Experience:	12 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS5 plus the following: <ul style="list-style-type: none"> • Responsible for serving as a Technical Team Lead on enterprise-wide systems. • Responsible for leading implementation efforts related to products/services that involve significant Commonwealth and federal oversight. • Serves as a mentor to team members by sharing industry best standards and practices.

Program Manager

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business, technical, and established quality requirements. The difference between a PM1, PM2, PM3, and PM4 will depend on the size of the project, and the breadth and scope of the project.

Program Manager (PM1)

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and

	<p>implementation.</p> <ul style="list-style-type: none"> • Accountable for delivery of all work tasks identified in the program plan. • Responsible for the capture and reporting of required program management metrics. • Adjusts and revises estimates when necessary. • Ensures all changes to scope follow processes and are documented. • Ensures new estimates are approved by the client and agreed upon. • Adjusts and revises estimates when necessary. • Manages and tracks the program progress against the program plan. • Monitors project milestones and phases to ensure the project is on schedule. • Takes corrective actions if a project begins to slip its schedule. • Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders. • Plans, organizes, prioritizes, and manages multiple work efforts across application teams. • Develops the detailed program plan for the enhancement or development effort • Accountable for the final program management evaluation review with stakeholders for approval upon program completion. • Responsible for tailoring and base line of all program templates. • Accountable to schedule or monitor status reviews, peer reviews, program management inspections, and software quality assurance work product and process reviews with the appropriate designated resources. • Notifies team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package. • Communicates and works with users and client as necessary. • Coordinates and presents proposals to agencies as necessary. • Analyzes and distributes reports on program metrics associated with work items related to improvement measures. • Ensures processes and activities are followed.
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Program Manager (PM2)

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> • Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders. • Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders. • Builds and maintains relationships with key stakeholders and customer representatives. • Directs work planning and scheduling design work. • Manages and tracks the program progress against the program plan. • Serves as the primary point of contact for all program-related issues and resolution of issues. • Coordinates and present proposals to agencies as necessary. • Identifies and manages program risk and develops risk mitigation strategies, track to closure. • Ensures team leads adjust and revise estimates when necessary. • Anticipates issues and proactively address them. Resolve conflicts with sensitivity and tact. • Coordinates the establishment of program standards and program specific

	<p>procedures with team leads.</p> <ul style="list-style-type: none"> • Responsible for project compliance with standards and procedures. • Responsible for the capturing and reporting of required program management metrics. • Responsible for tailoring and baseline of all program templates. • Develops and facilitates achievement of program service commitments and performance metrics. • Ensures that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies. • Accountable for the final program management evaluation review with stakeholders for approval upon program completion. • Communicates effectively with customers and software / hardware suppliers supporting the State as appropriate. • Identifies and tracks issues. • Balances workload with program members' capacity. • Communicates to team members how their work assignments relate to and help achieve program objectives. • Plans program specific training and orientation needs.
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Program Manager (PM3)

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM2 plus the following: <ul style="list-style-type: none"> • Accountable for activities with excess delivery cycles of 8 to 12 months.

Program Manager (PM4)

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM3 plus the following: <ul style="list-style-type: none"> • Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. • Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.

Project Manager

The Project Manager (PM) directs, administers, manages and facilitates an enhancement, business process re-engineering or developmental project. The Project Manager is the individual ultimately responsible to the agency and project Sponsor. The Project Manager's primary responsibility is to drive the entire effort from start to finish. The Project Manager must ensure that the project is completed on schedule, within the defined budget and that the final product meets the business, technical, and established quality requirements. The assignment to a project of a PM1, PM2, PM3, and PM4 will primarily be dependent on the size, complexity, target audience, the breadth and scope of the project.

Project Manager (PJMI)

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Responsible for the development of estimates for the enhancement, business process re-engineering or development effort in planning,

	<p>analysis, design, construction, testing, and implementation.</p> <ul style="list-style-type: none"> • Works with team leads to adjust and revise project estimates when necessary. • Ensure new project estimates are approved by the client and agreed upon. • Develop the detailed Project Management Plan for the enhancement, business process re-engineering or development effort. • Accountable for delivery of all work tasks identified in the Project Management Plan. • Manage, and track the project progress against the project schedule. • Develop work planning and scheduling work. • Monitor project milestones and phases and take corrective action as needed to ensure the project is on schedule. • Monitor and track the project budget and advise necessary stakeholders. • Plan, organize, prioritize, and manage multiple work efforts across the project team. • Notify team leads of project timelines, milestones, phases, work requests target dates, and approved executable work packages. • Accountable to schedule or monitor status reviews, project management inspections, and software quality assurance work product and process reviews with the appropriate stakeholders. • Responsible for the capture and reporting of required project management metrics. • Analyze and distribute reports on project metrics associated with work items related to improvement measures. • Ensure all changes to scope follow processes outlined in the Change Management Plan and are documented. • Prepare status reports on a periodic basis for the project team, team leads, group leads, Sponsor, and appropriate stakeholders. • Responsible to tailor and baseline all project templates. • Ensure processes and activities are followed. • Communicate and work with users and client as necessary. • Anticipate issues and proactively address them. Identify and track issues. • Build and maintain relationships with key stakeholders and customer representatives. • Serve as the primary point of contact for all project-related issues and resolution of issues. • Communicate effectively with customers and software / hardware suppliers supporting the commonwealth as appropriate. • Communicate to team members how their work assignments relate to and help achieve project objectives. • Accountable for the final project management evaluation review with stakeholders.
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Project Manager (PJM2)

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> • Accountable for the approval and sign-off of the Project Management Plan with customer representatives, and all affected project stakeholders. • Accountable for management of the project's scope for the project and gaining agreement and approval of scope changes with customer representatives and affected stakeholders. • Direct work planning and scheduling work. • Accountable for peer reviews with the appropriate project team resources. • Coordinate and present proposals to agencies as necessary.

	<ul style="list-style-type: none"> • Identify and manage project risk, and develop risk mitigation strategies, and track to closure. • Coordinate the establishment of project standards and project specific procedures with team leads. • Responsible for project compliance with standards and procedures. • Develop and facilitate achievement of project service commitments. • Ensure that tasks provide value and support the strategic direction of the project and meet service commitments. • Balance workload with project members' capacity. • Plan project specific training and orientation needs.
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Project Manager (PJM3)

Years of Relevant Experience:	6 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM2 plus the following:</p> <ul style="list-style-type: none"> • Direct, administer, manage and facilitate an enhancement, business process re-engineering or development of a high priority, high profile, and commonwealth enterprise – wide information technology project of strategic importance. • Accountable for activities with excess delivery cycles of 8 to 12 months. • Accountable for project coordination with multiple agencies. • Conduct reviews with agencies. • Report status and recommendations to senior leadership as needed. • Make decisions with in the designated authority as defined in the project Charter to minimize project risk supported by sound analysis and project management best practices. • Mentor less experienced project management project staff to build overall understanding of project management when needed. • Manage, coordinate, and establish priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the commonwealth. • Design project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel. • Coordinate project schedules across multiple agencies.

Project Manager (PJM4)

Years of Relevant Experience:	7 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM3 plus the following:</p> <ul style="list-style-type: none"> • Manage PM1, PM2 or PM3 roles on a multi - agency project. • Coordinate the communications of multiple Project Managers for their schedules.

Programmer

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the technologies. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

Programmer (PRI)

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Codes enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards. • Tests enhancement and development programs. • Participates in structured code reviews / walkthroughs. • Executes all required process steps. • Creates and provide content for operational documentation to Technical Writers. • Utilizes configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application. • Researches problems before approaching the Team Lead or Functional Architect for assistance. • Limited functional knowledge. • Follows quality standards. • Supports installation of application releases into production as directed. • Communicates accurate and useful status updates. • Able to work in a team environment. • Complete assigned tasks. • Strong communication skills; both written and spoken.

Programmer (PR2)

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR1 plus the following:</p> <ul style="list-style-type: none"> • Analyzes and designs enhancements, development programs, and/or required fixes to production problems. • Designs applications to functional and technical programming standards. • Works with Functional Architects to gather and interprets user requirements into design specifications. • Develops system specifications and interfaces. • Determines time estimates and schedule for work. • Moderates functional and process knowledge. • Assists in managing and directing Application Team processes. • Coordinates work with other software developers on Application Teams. • Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks. • Develops application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects. • Operating System expertise sufficient to perform performance and tuning diagnostics. • Works with users to ensure that solutions meet business requirements. • Execution of all responsibilities with little direct supervision of Team Lead. • Generally aware of new developments in industry and process and has ability to apply them to work as appropriate. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks and action items.

Programmer (PR3)

Years of Relevant	6 to 7years
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Experience:	
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> • Plans all required process steps. • Reviews and understands the Application Team’s work plan. • Provides status of work to Team Lead. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team. • Develops contingency plans as necessary. • Engages in ongoing process improvement. • Detailed functional and process knowledge. • Utilizes deep modeling, design and coding skills. • Provides expertise in one or more database environments.

Programmer (PR4)

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> • Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer. • Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer. • This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team • Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing. • Works with necessary personnel to determine if modifications are necessary with interested personnel to determine necessity for modifications or enhancements. • Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders. • May coordinate activities of computer programmers.

Programmer (PR5)

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR4 plus the following:</p> <ul style="list-style-type: none"> • Proven track record of hands-on technical design and code work within large complex systems. • Proven hands-on technical work with a variety of technologies. • Demonstrated technical expertise integrating a variety of diverse technical environments and cross-platform technologies. • Proven experience mentoring and performing supervisory functions for technical teams. • Able to make best practice recommendations based on past work. • Proven ability to present complex technical constructs to business and non-technical users. • Proven ability to collaborate with business users, project managers and technical architects.

Programmer (PR6)

Years of Relevant Experience:	12 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	All roles specified in PR5 plus the following: <ul style="list-style-type: none">• Proven track record leading technical design and code work within complex enterprise systems.• Proven hands-on technical design and development expertise working with emerging technologies in diverse technical environments and cross-platform technologies.• Serves as a mentor to team members by sharing industry best standards and practices.• Proven ability to lead complex technical discussions with business and non-technical users.

Quality Assurance Specialist

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

Quality Assurance Specialist (QAS1)

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none">• Assists in software activities in defined span of control for the organization.• Tracks and monitors process and work product improvement opportunities.• Collects, reviews, and evaluates the project's required work products against standard work product templates.• Verifies that established measurement procedures are used and all required metrics are collected.• Responds to requests for information.• Coordinates work with others on team and across teams• Draft report of observations, minor and major non-compliance.• Develops quality standards.• Monitors progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.• Conducts training courses with project teams on software quality review process.• Researches problems before approaching Quality Assurance Lead for assistance.• Communicates accurate and useful status updates.• Manages and reports time spent on all work activities.• Follow quality standards.• Able to work in a team environment

	<ul style="list-style-type: none"> • Completes assigned tasks. • Strong communication skills; both written and spoken.
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Quality Assurance Specialist (QAS2)

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> • Conducts software quality phase end review activities (work product and process) for each software project and produces the required quality assurance reports, as specified in the project's quality assurance plan. • Ensures the software development process followed by the project teams is compliant with approved tailored processes. • Reviews and checks project software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan. • Prepares preliminary software quality audit package for review before conduct of audit. • Defines quality standards. • Monitors progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines. • Assists in managing and improving quality assurance team processes. • Reviews and understands project team work plan. • Determines time estimates and schedule for software quality review work. Conduct reviews according to schedule. • Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive. • Identifies and tracks issues, risks and action items affecting own work and work of team. • Reports on progress of action item resolution and possible risk areas. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner.

Quality Assurance Specialist (QAS3)

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> • Reviews required work products to ensure compliance with approved tailored procedures and standards. • Reviews and checks software development activities and the associated internal tasks required as employed by the project and specified in the project plan. • Compares actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements. • Performs detailed reviews of interim and final tasks as appropriate. • Ensures process improvement opportunities are reviewed by appropriate contact to identify training needs of the organization. • Performs or manages the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan. • Develops and manages short and long-term plans and schedules for organization wide software quality needs. • Balances workload with team's capacity by managing the team's activities according to schedule and budgets.

	<ul style="list-style-type: none"> • Coordinates and procures the required skills and techniques required. • Obtains feedback from project teams regarding the overall effectiveness of processes and procedures – Forward to appropriate stakeholders and process owners. • Provides feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities. • Reports all software quality-revealed non-compliance. • Provides regular reports on the results of compliance reviews to the project team, project team leaders and management. • Reports on progress on action item resolution and possible risk areas. • Anticipates and resolves issues dealing with software quality. • Develops options and recommendations to assist teams in resolving issues. • Ensure action items are addressed and closed based on agreed dates and activities. • Ensure that defined processes are followed. • Communicate related improvement measures to the project team. • Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team. • Communicate and work with customers and other personnel as necessary. • Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team. • Communicate to team members the relationship between their work assignments and the team and project objectives. • Lead efforts in developing and facilitating implementation of team goals and metrics.
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Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization’s objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

Senior Architect (SARI)

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> • Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers. • Establishes priorities and schedules, and oversees and reviews work of systems analysis personnel and programming personnel. • Reviews feasibility studies and time and cost estimates of new or revised systems.

	<ul style="list-style-type: none"> • Assists in the development of standards, procedures, and operating systems applications. • A combination of directly-related technical training and hands-on experience. • Works with stakeholders and management to ensure projects are completed on time and according to organization standards. • Consults with personnel in other information systems groups to coordinate activities. • Consults with management to clarify systems and programs intent, identify problems, suggest changes, and determine extent of application systems changes required. • Participates in developing a project plan and schedule with key milestones, contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data. • Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer. • Analyzes test runs on computer and supervises correction of coded program and input data. • Manages the revision of existing programs to increase operating efficiency or adapt to new requirements. • Compiles documentation of program development and subsequent revisions. • Trains subordinates in systems analysis, feasibility studies, programming, and program coding. • Prescribes standards for terms and symbols used to simplify interpretation of programs. • Collaborates with computer manufacturers and other users to develop new programming methods. • Prepares records and reports.
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Senior Architect (SAR2)

Years of Relevant Experience:	8 plus years software architecture, development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<p>All roles specified in SAR1 plus the following:</p> <ul style="list-style-type: none"> • Leads systems analysis for architecture and development of new applications. • Establishes development schedule, and allocates work of personnel based on project plans, timelines and budgets. • Works with organizational leadership to ensure projects are in line with long-term IT strategies and initiatives. • Coordinates project activities with all departments/personnel involved. • Works with management to articulate systems and programs purpose, identifies problems, suggest changes, and determines required changes to existing applications. • Provides mentoring and guidance to agency personnel and leadership.

Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical

solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

Senior Business Subject Matter Expert (SME1)

Years of Relevant Experience:	More than 10 years
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> • Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization. • Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter. • Conducts study or survey on need or problem to obtain data required for solution. • Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services. • Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution. • Requires experience providing consulting services to governmental entities. • May be designated according to field of business and technical specialization.

Senior Business Subject Matter Expert (SME2)

Years of Relevant Experience:	15 plus years of experience
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<p>All roles specified in SME1 plus the following:</p> <ul style="list-style-type: none"> • Guides executive-level stakeholders based on industry standards related to specific discipline or field of specialization. • Requires specific expertise in related technical fields or area of specialization. • Conducts detailed audits and analysis to identify obstacles and suggests recommended solutions. • Requires extensive experience providing consulting services to governmental entities related to specific technologies or field of specialization. • Provides mentoring and guidance to agency personnel and leadership.

Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization’s objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to

organization. They consult with the client to define needs or issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

Senior Database Architect (SDAI)

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> • Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management. • Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements. • Analyzes organization's business requirements for database design, and implements changes to database as required. • Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary. • Provides detailed design and specification documentation, including flowcharts, for all aspects of the database. • Works with database analysts to develop methodologies, report views, queries, and table replications • Ensures that all the data is in the proper format. • Participates in the identification, prioritization, and development of technical initiatives and strategies. • Develops and maintains database standards and naming conventions. • Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.

Senior Program Manager

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

Senior Program Manager (SPMI)

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM4 plus the following:</p> <ul style="list-style-type: none"> • Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization. • Determines project needs and acquires resources required for the success of the project.

	<ul style="list-style-type: none"> • Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques. • Coordinates project performance with the other work of the affected department or departments. • Excludes those who do not have full time responsibilities for project management.
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Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

Service Desk (SD1)

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> • Receives telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems. • Ascertains the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system. • Escalates problems in accordance with defined procedures. • Assists users through problem solving steps • Uses technical databases to research problems, and talks with co-workers to research problem and find solution. • Tests software and hardware for troubleshooting and problem resolution. • Provides service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.). • Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments. • Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. • Assists in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment. • Provides accurate and complete answers to general use and administrative environment questions in a timely manner. • Supports shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. • Communicates accurate and useful status updates. • Manages and reports time spent on all work activities. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken.

Service Desk (SD2)

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and experience combined.

Role Description:	<p>All roles specified in SD2 plus the following:</p> <ul style="list-style-type: none"> • Tests software and hardware to evaluate ease of use and whether product will aid user in performing work. • Writes or revises training manuals and procedures. • Develops training materials, such as exercises and visual displays. • Trains users on software and hardware on-site or in classroom, or recommend outside contractors to provide training. • Writes software and hardware evaluation and recommendation for management review. • Implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.
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Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions. The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

Software Process Engineer (SPSI)

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Facilitates the implementation of standard software engineering processes. • Identifies software development process improvement opportunities either independently or through working with projects and teams. • Assists in planning software process improvement initiatives. • Directs and participates in teams working on the analysis, design, construction, testing, and implementation of new processes. • Works with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate. • Provides ongoing support to projects and teams in the use and understanding of the software processes. • Provides on-site support for teams on process related issues. • Provides assistance to the Software Process Engineer Lead in planning and scheduling activities. • Provides support in tracking and monitoring the success of process improvement initiatives. • Monitors and solicits feedback on the usability and functionality of implemented processes. • Communicates accurate and useful status updates. • Manages and report time spent on all work activities. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks.

	<ul style="list-style-type: none"> • Strong communication skills; both written and spoken
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Software Process Engineer (SPS2)

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> • Facilitates the implementation of standard software engineering processes across agencies. • Determines time estimates and schedule for own work and resolve issues on a timely basis. • Identifies and tracks issues, risks and action items. • Determines process to support various initiatives. • Leads the development of content for process training and deliver process training as appropriate. • Coordinates with various teams about process improvement opportunities. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks and action items.

Software Process Engineer (SPS3)

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> • Organizes and prepares work effectively to facilitate proactive resolution of problems. • Anticipates and resolves issues on a timely basis. • Communicates accurate and useful status as appropriate. • Demonstrates and promotes a focus on client service. • Communicates effectively with suppliers as appropriate. • Works with internal customers and others to identify direction of software process. • Identifies knowledge in a form that is reusable.

System Administrator

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

System Administrator (SAI)

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs, and maintain system database files. • Maintains the project servers. • Maintains the file and print capacity • Ensures that backups are performed as appropriate. • Acts as a front-line interface to users. • Accepts trouble reports and dispatch them to appropriate system administrators.

	<ul style="list-style-type: none"> • Able to write scripts in a particular administrative language. • Programming experience with any applicable language. • Communicates accurate and useful status updates. • Manages and reports time spent on all work activities. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken
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System Administrator (SA2)

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> • Responsible for operating and other system software. • Responsible for upgrading the operating and system software and keeping patches current. • Familiarity with fundamental networking/distributed computing environment concepts. • Able to do minimal debugging and modification of programs. • Executes the disaster recovery/back up procedures and archiving procedures. • Manages security for servers. • Responsible for performance tuning, capacity planning, database administration, and fault management. • Provides tier two support of the technical infrastructure. • Coordinating efforts with vendors if tier three support is required. • Responsible for ensuring high priority issues are resolved in a timely manner. • Responsible for keeping the environment up and running. • In many cases is responsible for identifying and reporting hardware problems. • Capable of writing purchase justifications. • Understands basic routing concepts. • Identifies and tracks issues, risks, and action items. • Resolves and/or assists in resolving issues. • Reviews, prioritizes, and researches service requests. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner.

System Administrator (SA3)

Years of Relevant Experience:	4 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> • Solid understanding of networking/distributed computing environment concepts. • Understands principles of routing client/server programming. • Manages expectations at all levels: customers/end users, executive sponsors. • Ensures quality standards are followed. • Understands the business application of technical support and design in an application development environment. • Works with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities. • Understands the design of consistent network-wide file system layouts

	<ul style="list-style-type: none"> • Maintains strong relationships with employees and various tier two and three support groups. • Develops plans for disaster recovery/ back up and archiving. • Manages the daily operations of the systems management team to ensure service levels are being met. • Manages the systems management team's support issue and backlog. • Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels. • Acts as the first level of escalation for high priority support issues.
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System Administrator (SA4)

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA3 plus the following:</p> <ul style="list-style-type: none"> • Functions as the liaison to the various support groups with whom the systems management team interfaces. • Develops the technical infrastructure maintenance strategy. • Manages the system management resources. • Acts as a system's management expert. • Analyzes, determines, and documents requirements in terms of system management needs and implement them. • Identifies, approves, and prioritizes team projects. • Manages a large site or network. • Recommends policies on system use and services.

System Administrator (SA5)

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA4 plus the following:</p> <ul style="list-style-type: none"> • Functions as the Team Lead to the various support groups with whom the systems management team interfaces. • Leads the creation of technical infrastructure maintenance strategies for enterprise environments. • Creates system management strategy and leads implementation efforts. • Oversees technical project efforts and implementation strategy. • Guides policies and best practices based on current market and technical standards.

System Specialist

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

System Specialist (SS1)

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Assists in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment. • Makes recommendations on functional and technical improvements to the environment. • Participates in performance and volume analysis and design. • Participates in performance improvement activities. Identify and apply potential improvements related to the environment for an application. • Provides accurate and complete answers to general use and environment questions in a timely manner. • Provides effective on-site environment support as needed. • Accurately sets severity of identified defects. • Provides input to training and/or documentation materials regarding latest technical and functional design changes. • Ensures that all work is documented for future reference. • Follows quality standards. • Ensures effective and reliable backups are being performed and distributed properly. • Proactively addresses customer needs. • Tracks and anticipates volume and type of use of the environment. • Plans and implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. • Basic scripting and programming skills, including languages that run on specified platform. • Analytical and customer service skills. • Communicates accurate and useful status updates. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken.

System Specialist (SS2)

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> • Plans and manages network operating system upgrades. • Actively participates in analyzing and evaluating emerging software and hardware technologies/standards. • Serves as a liaison between teams for network planning and connectivity. • Develops appropriate functional and usability standards for the environments. • Plans or assists in planning network environment, including supporting existing structure and enhancements. • Plans and coordinates testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application or Environment team. • Develops contingency plans as necessary. • Analyzes the functional and/or technical impact of new product releases. • Advanced scripting and programming skills, including languages that run on specified platform.

	<ul style="list-style-type: none"> • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and track issues, risks and action items.
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System Specialist (SS3)

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> • Identifies opportunities for new and improved technologies/standards to be used in the organization. • Identifies, plans, and implements phase-out strategies for products and technologies. • Plans and coordinates testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment. • Demonstrates expertise in teaching/conveying technical courses/concepts. • Assists in setting architecture direction and knowledge sharing. • Plans, organizes, prioritizes, and manages multiple work efforts the Application or Environment Teams. • Develops appropriate work programs and uses to effectively schedule tasks/assignments.

Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

Team Lead (TL1)

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> • Monitors stability of production applications owned by Application Team. • Prepares estimates for maintenance and enhancement of existing applications and development of new applications. • Performs detailed reviews of interim and final tasks as appropriate. • Processes work requests; review, prioritize, and package. • Manages and reviews tasks of suppliers and other interfaces to the Application Team. • Conducts structured walk-throughs or inspections; manage issues to closure.

	<ul style="list-style-type: none"> • Develops and manages short and long-term plans and schedules. • Directs the development of accurate estimates for Application Team activities as required. • Balances workload with Application Teams capacity by managing the Application Teams activities according to schedule. • Manages the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement. • Ensures work remains within the agreed scope. • Tracks work plan baseline against results. • Coordinates/communicates with Group Leads and/or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned. • Proactively identifies and manages issues/risks affecting the project. • Communicates accurate and useful status to Group Lead and other management on a timely basis. • Identifies and initiates continuous improvements. • Instills commitment to quality, customer service, ownership, and teamwork. • Conducts post project wrap-ups. • Monitors and measures maintenance and development process effectiveness. • Ensures that defined processes are followed. • Manages expectations of the Application Teams internal and external customers. • Facilitates communication and knowledge sharing within the Application Teams. • Maintains awareness of new developments in industry and processes and apply as appropriate. • Develops and deepens understanding of system business requirements supported by the Application Team. • Communicates clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams. • Conducts structured walk-throughs or inspections; manage issues to closure.
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Team Lead (TL2)

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> • Manages the resolution of high severity production problems. • Manages and directs Application Team activities employing appropriate program management and planning principles. • Coordinates work with other Team Leads as appropriate. • Coordinates and procures the required skills and techniques required by the Application Team.

Technical Architecture Specialist

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business

requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

Technical Architecture Specialist (TAS1)

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> • Defines test plans and criteria for acceptance for the technical components of an application. • Ensures business requirements are supported by the technical architecture. • Assists in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client. • Defines and evaluates logical and physical data models. • Assists in development of overall system technical architecture - including software and hardware. • Defines test plans and criteria for acceptance for the technical components of an application. • Analyzes, determines, and documents technical requirements and change request impact analysis. • Participates in detailed design and product test execution as required. • Develops technical programming standards. • Ensures business requirements are supported by the technical architecture. • Conducts structured walk-throughs or inspections for technical areas; resolve issues. • Assists in defining technical programming standards. • Communicates accurate and useful status updates. • Manages and reports time spent on all work activities. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken. • Performs integration of various architectures across multiple enterprises • Develops overall system technical architecture, including software and hardware. • Performs review of technical designs, code, and component test plans. • Resolves and/or assists in resolving cross application technical issues. • Conducts structured walk-throughs or inspections for technical areas; resolve issues. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks and action items.

Technical Architecture Specialist (TAS2)

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> • Ensures consistency and completeness across data models.

	<ul style="list-style-type: none"> • Plans and delivers development architecture environments in coordination with the • Environmental Support Specialist. • Assists in managing and directing team’s technical architecture processes. • Provides assistance in scheduling design work for Lead Technical Architecture Specialist. • Develops and documents expert practices/ standards. • Possesses strong analysis, presentation, documentation, and quality assurance skills. • Analyzes, determines, and documents technical requirements and impact analysis for technical and development architectures. • Explains defect priorities and enhancement classifications to client and customer when needed. • Maintains awareness of new technological developments in industry and processes - implement concepts appropriately. • Leads or participates in setting the service levels for the application. • Defines overall system logical architecture. • Provides standard, well-structured work planning that defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria. • Prepares contingencies, scenarios, scenario plans and action items to resolve issues. • Leads efforts in providing technical expertise, guidance, and training to the Application and Test Teams.
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Technical Architecture Specialist (TAS3)

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> • Communicates effectively with IT staff, client organization and software hardware suppliers. • Leads efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning, performance and capacity analysis, technical standards, technical reliability and flexibility. • Designs and defines overall system technical architecture - including software and hardware within the framework and constraints of technical architecture. • Evaluates alternative designs. • Maintains control of specific tools and assets. • Owns the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture. • Plans, designs, develops, and/or executes of technical architecture. • Assists with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management. • Provides experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies. • Communicates accurate and useful status reports and other management on a timely basis. • Coordinates and conducts project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads. • Integrates issues and identifies impact. • Communicates and resolves application interface issues. • Communicates to team members the relations between their work assignments and the organizational and/ or program strategy, objectives,

	business and technology needs of the application / system. <ul style="list-style-type: none"> • Shares knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture • Interprets and communicates technical architecture to the Technology Application Architecture Team(s).
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Technical Specialist

The Technical Specialist is a senior level resource with specialized knowledge and experience in a specific technology such as SharePoint development or an SAP specialist. The Technical Specialist has an overall knowledge and understanding of application development and architecture that serves as a strong base for technical expertise in a specific product or program.

Technical Specialist (TS1)

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Demonstrates expertise in conveying technical and functional concepts for a specific technical specialty. • Identifies improvements to project standards to achieve high quality services/ products. • Able to identify best practices and standards for the use of the product.

Technical Specialist (TS2)

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS1 plus the following: <ul style="list-style-type: none"> • Delivers support and design for industry specific applications that require integration with statewide systems or applications. • Interacts with executive level business users or technical experts. • May function as a niche technical SME.

Technical Specialist (TS3)

Years of Relevant Experience:	8 to 10 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS2 plus the following: <ul style="list-style-type: none"> • Advanced experience in the required technical subject matter.

Technical Specialist (TS4)

Years of Relevant Experience:	More than 10 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS3 plus the following: <ul style="list-style-type: none"> • Proven experience with a technical specialty across large and complex implementations and systems.

Technical Specialist (TS5)

Years of Relevant Experience:	More than 12 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS4 plus the following: <ul style="list-style-type: none"> • Lead experience with technical expertise across large, complex implementations for enterprise systems.

Technical Writer

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and/or technology and is able to put procedures in a logical sequence. The experienced Technical Writer provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications within their Tower.

Technical Writer (TW1)

Years of Relevant Experience:	Up to 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> • Develops, enhances, and maintains user documentation for multiple applications including documentation required for the operations provider. • Develops on-line source documentation as appropriate. • Maintains documentation libraries and subscription lists. • Identifies, creates, revises, and maintains documentation and templates needed by the Application Teams. • Ensures appropriate control access/use of documentation materials. • Maintains application and user documentation. • Ensures messages and terminology is consistent across all written materials. • Researches and completes documentation service requests. • Communicates and works with customers and other Client Telecommunications personnel as necessary. • Works with Application Team members to enhance their understanding of end-user and technical documentation. • Communicates accurate and useful status updates. • Manages and reports time spent on all work activities. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken

Technical Writer (TW2)

Years of Relevant Experience:	2 to 4 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> • Reviews and prioritizes documentation service requests. • Determines procedures for use of on-line documentation tools and version control documentation as appropriate. • Assists or guides other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications. • Educates both business and technical groups on the essential need for developing and using standard documentation for all processes. • Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive. • Researches problems before approaching Lead Technical Writer or Team Lead for assistance. • Assists the Application Team Lead in monitoring budget by providing estimated-time- to-complete and actuals for assigned tasks. • Identifies and makes recommendations around documentation and templates needed by the Application Teams. • Works with users and other State personnel to ensure that the solutions

	<p>meet State business requirements.</p> <ul style="list-style-type: none"> • Identifies and initiates continuous improvement opportunities. • Directs the development of accurate estimates for documentation requests/activities as required • Develops options and recommendations to assist documentation team members in resolving issues. • Leads efforts in developing and facilitating implementation of the Documentation team goals and metrics. • Develops workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer • Reviews and understands the Application Teams work plan. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks and action items.
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Technical Writer (TW3)

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> • Reviews and approves procedures for use of on-line documentation tools as appropriate. • Identifies business and technical documentation needs not currently addressed. • Manages Technical Writer. • Owns documentation libraries and subscription lists. • Promotes the need for developing and using standard documentation for all processes within the organization. • Performs detailed reviews of interim and final tasks as appropriate. • Oversees processing of service requests. • Manages, deploys, and schedules Technical Writer activities. • Develops and manages short and long-term documentation plans and schedules. • Understands work requests/needs within Application Teams • Manages the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance. • Works with Team Leads and Group Leads to set documentation goals.

Technical Writer (TW4)

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW3 plus the following:</p> <ul style="list-style-type: none"> • Ensures work remains within the agreed project scope. • Coordinates work with other Lead Technical Writers as appropriate. • Coordinates and procure the required skills and techniques required by the Application Teams for documentation needs. • Communicates accurate and useful status reports to Group Lead and other management on a timely basis. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team. • Develops contingency plans as necessary. • Manages expectations of the Technical Writers' internal and external customers. • Defines documentation quality standards as needed. • Conducts post project reviews and quality assessments.

	<ul style="list-style-type: none"> • Ensures that defined processes are followed. • Communicates related improvement measures to the team. • Communicates clearly to Technical Writers their goals, organizational philosophies, policies and procedures.
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Telecom Engineer

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

Telecom Engineer (TE1)

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> • Ensures proper connectivity from site-to-site and internal to facility. • Experience with CAT5, Romex, and similar cables/wiring. • Pulls cable and ensures adherence to all building codes. • Escalates construction and installation problems to the construction/integration manager, as needed. • Prepares all job-related paperwork. • Closes out work authorization when equipment is in service.

Telecom Engineer (TE2)

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> • Inspects customer premises to ascertain available space for equipment installation • Determines the type and quantity of equipment that can be installed to provide requested communication facilities. • Creates floor plan of equipment arrangement for customer or architect approval. • Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed. • Orders equipment and prepare installation specifications. • Monitors progress of installation to ensure facilities are ready on specified date.

Telecom Engineer (TE3)

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE2 plus the following:</p> <ul style="list-style-type: none"> • Leads full integration teams and interact with large infrastructure teams. • Acts as telecommunications interface to outside vendors and construction manager. • Directs activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.

Tester

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

Tester (*TEST1*)

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> • Creates test models for product test and release control (plans, data, and scripts). • Conducts structured walk-throughs • Executes assembly or product tests. • Meets time estimates for assigned tasks. • Communicates accurate and useful status updates. • Follows quality standards. • Able to work in a team environment • Completes assigned tasks. • Strong communication skills; both written and spoken

Tester (*TEST2*)

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test1 plus the following:</p> <ul style="list-style-type: none"> • Defines product test plans and criteria for acceptance. • Develops, updates, and maintains testing standards and procedures. • Resolves testing process questions / issues. • Assists in the planning, creation, and control of the test environments. • Conducts inspections; resolve issues. • Coordinates and executes assembly or product tests with the Test Team, Application Team and the Program Manager. • Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks. • Works with Test Team members to enhance their testing skills and build technical and Updates and tests release installation procedures. • Generally aware of new developments in industry and processes and ability to apply to work as appropriate. • Determines time estimates and schedule for work efforts. • Defines and utilizes entry / exit criteria for testing. • Schedules the design of structured walk-throughs or inspections; resolve issues. • Works with users to ensure that solutions meet business requirements. • Anticipates and resolves issues specific to the team. • Determines time estimates and schedule for own work and resolve issues in a timely manner. • Identifies and tracks issues, risks, and action items.

Tester (*TEST3*)

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> • Reviews and understands the Test Team work plan.

	<ul style="list-style-type: none"> • Assists in managing and directing Test Team processes. • Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Test and/or Application Teams. • Develops contingency plans as necessary. • Researches problems before approaching the Team Lead or Test Team Lead for assistance. • Assists or guides Testers as needed. • Develops understanding of system business requirements supported by the Test team • Assists Application Teams to plan and execute component and assembly tests. • Participates in assembly or product test execution as required.
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Video Conference Specialist

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

Video Conference Specialist (VCS1)

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> • Maintains equipment in working condition. • Makes minor adjustments and repairs to equipment • Notifies maintenance personnel when correction of major malfunction is required. • Positions, installs, connects, and repairs equipment. • Familiar with fundamental networking/distributed computing environment concepts. • Troubleshoots network issues, systems, and applications to identify and correct malfunctions and other operational difficulties. • Investigates user problems, identifies their source, determines possible solutions, tests and implements solutions • Ensures high priority issues are resolved in a timely manner. • Excellent communication skills.

Video Conference Specialist (VCS2)

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> • Coordinates equipment operation with material presented, according to notations in script or instructions of speaker. • Advises speakers and presenters on alternative media. • Meets with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems. • Actively participates in analyzing and evaluating emerging technologies/standards. • Evaluates and/or recommend purchases of network hardware, software, and peripheral equipment. • Acts as the first level of escalation for high priority support issues. • Functions as the liaison to the various support groups with whom the systems management team interfaces. • Develops the technical maintenance strategy. • Analyzes, determines, and documents requirements in terms of system management needs and implement them. • Identifies, approves, and prioritizes team projects.

	<ul style="list-style-type: none"> • Mentors and supervises other team members.
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Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

Voice/Data Engineer (VDE1)

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> • Ensures proper connectivity of voice and data services and technologies. • Interacts and work with Telecom Engineer, Integration Engineer, or Project Manager. • Prepares all job-related paperwork • Closes out work authorization when equipment is in service.

Voice/Data Engineer (VDE2)

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> • Prepares equipment floor plan for customer or architect approval. • Determines telephone, data services/components, and audio visual equipment placement within facility. • Acts as installer of equipment for data/voice or Audio visual use. • Installs, tests, configures, and train users on products and equipment. • Supports systems and products associated with telecommunications/telephone and data within a facility or department.

Voice/Data Engineer (VDE3)

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE2 plus the following:</p> <ul style="list-style-type: none"> • Familiar with at least one type of equipment or service that is highly specialized. • Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed with job. • Orders equipment and prepare installation specification. • Monitors installation progress to ensure that the facilities are ready on projected date. • Leads a team of installers and junior Voice/Data Engineers.

Exception

An exception job category may be used when an agency has a need for IT staff augmentation services that are not included in the current list of job titles and skill categories or rates. Agency CIO or designee and Contract Manager approval is required for the use of the exception job category.