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APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst

Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently. Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.

Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently. Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between

	establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently. Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.

Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently. Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers.

	Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently. Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.

4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. 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. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.

- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project leader or manager. A certain degree of creativity and latitude is required.

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.

Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet

current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.

- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.

System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.

System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the Commonwealth and industry best practices for software engineering. · Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of systems across the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the Commonwealth and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

8. ERP Analyst

ERP Analyst 1	
Years of Experience	0-2
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Typically reports to a supervisor or manager.

ERP Analyst 2	
Years of Experience	2-4
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision. A certain degree of creativity and latitude is required. Typically reports to a supervisor or manager

ERP Analyst 3	
Years of Experience	4-6
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Analyst 4	
Years of Experience	6-8
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to

	ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Analyst 5	
Years of Experience	8+
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

9. ERP Developer

ERP Developer 1	
Years of Experience	2-4
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 2	
Years of Experience	4-6
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 3	
Years of Experience	6-8
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 4	
Years of Experience	8-10
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 5	
Years of Experience	10+
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

10. ERP Database Administration

ERP Database Administrator 1	
Years of Experience	1-3

Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

ERP Database Administrator 2	
Years of Experience	3-5
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

ERP Database Administrator 3	
Years of Experience	5-7
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

ERP Database Administrator 4	
Years of Experience	7-10
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database

	designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

ERP Database Administrator 5	
Years of Experience	10+
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

11. ERP Project Manager

ERP Project Manager 1	
Years of Experience	1-7
Job Description	Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members

	and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers. http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589

ERP Project Manager 2	
Years of Experience	8-10
Job Description	Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers. http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589

ERP Project Manager 3	
Years of Experience	11+
Job Description	Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers. http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589

12. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain

	approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

13. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

14. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

15. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

16. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

17. Geographic Information System Technician I

Geographic Information System Technician I	

Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

18. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

19. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-

	map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

20. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.

Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

21. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. 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	
Years of Experience	4 year college degree or equivalent technical study.

Job Description	• 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 • Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. • 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.

22. Website Developer

Website Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Website Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

23. Webmaster

Webmaster 1	
Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.

Webmaster 2	
Years of Experience	More than five years of industry experience.

Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

24. Cloud Architect

Designs, develops, implements, utilizes, and conforms to enterprise cloud architecture application solutions, strategies, processes, and standards, focusing on expertise in cloud technologies. Collaborates with business owners, Analysts, Engineers, development teams, and infrastructure services to define, establish, and communicate application and data architecture standards, policies, and directions. Designs high quality architectures, and drives architecture activities that are aligned to organization requirements set by leadership on behalf of stakeholders and are consistent with enterprise architectural standards.

Cloud Architect 1	
Years of Experience	1-6 years of experience
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Cloud Architect 2	
Years of Experience	7-12 years of experience
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Cloud Architect 3	
Years of Experience	13 or more years of experience
Job Description	Relies on experience and judgment to plan and accomplish goals. Independently performs a variety of complicated tasks. A wide degree of creativity and latitude is expected.

25. Cloud Engineer

Researches, designs, develops, tests, and evaluates systems that support cloud implementation and integrates with cloud service providers, applying principles and techniques of computer science, engineering, and mathematical analysis. Plans and conducts technical tasks associated with the implementation and maintenance of private/public cloud enterprise infrastructure. Develops and executes cloud solution roadmaps as they relate to business and executes company strategy to drive the achievement of business objective.

Cloud Engineer 1	
Years of Experience	1-6 years of experience
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Cloud Engineer 2	
Years of Experience	7-12 years of experience
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Cloud Engineer 3	
Years of Experience	13 or more years of experience
Job Description	Relies on experience and judgment to plan and accomplish goals. Independently performs a variety of complicated tasks. A wide degree of creativity and latitude is expected.

26. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure

a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose 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. Strong communication skills.
- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

27. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.
- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.

Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

28. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.

Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

29. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to Commonwealth policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off

site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

30. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

31. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.
- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8-11 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Data Warehouse Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

32. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).
- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies

user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.

- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.
- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.

Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

33. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.
- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.

- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts in eVA or equivalent automated systems
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement Analyst	
Years of Experience	A minimum of four years of experience required in the following areas; IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required. Knowledge of the Virginia Procurement Act and the eVA system very helpful.

34. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and Commonwealth project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and VITA. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and

regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.

IT MANAGEMENT SERVICES

35. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.

36. Business Process Reengineering

Business Process Reengineering	
Years of Experience	5 or more years
Job Description	This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts. Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.

37. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	This position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as:, Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard. Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on Commonwealth Enterprise Architecture Standards.

38. IT Strategist

IT Strategist	
Years of Experience	5 or more years
Job Description	Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.

39. IT Auditor

IT Auditor 1	
Years of Experience	0-2 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 4	
Years of Experience	6-8 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

40. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

41. IT Sourcing Consultant

IT Sourcing Consultant 2	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process, through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT Sourcing Consultant 3	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm

	contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

42. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with Commonwealth IT Security policies, standards, and guidelines.
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and VITA to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.
- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

IT Security Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

IT Security Analyst 4	
Years of Experience	12 or more years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

43. IT Security Architect

IT Security Architect 1	
Years of Experience	3+ years of experience in security architecture 9+ years of experience in information security 9+ years of experience working with computer systems 9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying Commonwealth IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture. Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

IT Security Architect 2	
Years of Experience	5+ years of experience in security architecture 11+ years of experience in information security 11+ years of experience working with computer systems 11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying Commonwealth IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture. Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

44. Cybersecurity Engineer

Develops and implements advanced cyber defense solutions and changes for organizations, safeguards the corporate infrastructure from infiltrations of exfiltration, and assures that the system is built to specification and is deployed successfully. Designs, maintains, and operates highly complex and high secure communications network environments. Performs in-depth network security analysis, and conducts preliminary incident response, event analysis, and threat intelligence. Reviews security events that could be a detriment to the organization's overall security stance.

Cybersecurity Engineer 1	
Years of Experience	1-6 years of experience in the field
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Cybersecurity Engineer 2	
Years of Experience	7-12 years of experience in the field
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Cybersecurity Engineer 3	
Years of Experience	13 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals. Independently performs a variety of complicated tasks. A wide degree of creativity and latitude is expected.

45. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

PROJECT MANAGEMENT

46. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team

members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.

- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.
- Project Managers are required to be qualified under the Commonwealth of Virginia Selection and Training Standard for IT Project Managers. https://www.vita.virginia.gov/media/vitavirginiagov/it-governance/psgs/pdf/Project_Management_Selection_Training_Standard_CPM11102.pdf

Project Manager 1	
Years of Experience	1 to 7 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Project Manager 2	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 3	
Years of Experience	11-14 years of experience in the field or in a related area.

Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 4	
Years of Experience	15 or more years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 5	
Years of Experience	More than 15 years of experience in the field or in a related area.
Job Description	Advanced experience managing complex projects or multiple projects; Demonstrated and advanced understanding of project management methodologies.

47. Program Manager

Program Manager	
Years of Experience	More than 15 years of experience in the field or in a related area.
Job Description	Manages programs to ensure that implementation and prescribed activities are carried out in accordance with specified objectives. Plans and develops methods and procedures for implementing programs, directs and coordinates program activities to ensure project goals are achieved, and exercises control over personnel responsible for specific functions or phases of programs.

48. Project Lead

- The Project Lead shall have day to day responsibility for management of a project team, providing technical team leadership on complex projects. They are responsible for program design, coding, testing, debugging, documentation and support. They shall have full technical

knowledge of all phases of applications systems analysis and programming. There may be multiple phases of the project for which they have responsibility. This person shall manage day-to-day execution of design, development, testing and implementation activities; actively encourage and facilitate communication between the business analysts, development, and QA teams; and ensure that system requirements are documented, complete, accurate and approved.

- This person shall ensure formal design reviews are held regularly for each iteration or code cycle and work with program leadership team to establish and manage the project iteration and release cycles and attend release planning meetings. This person shall manage development activities and coordinate technical and application components with other Commonwealth projects and applications; ensure that appropriate system support and maintenance documentation is complete, which includes support documentation for Help Desk support and maintenance staff. This person shall also review release notes for accuracy, and reports to the Project Manager and works with the Project Manager to determine project resource requirements.

Project Lead 1	
Years of Experience	1 to 7 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Project Lead 2	
Years of Experience	8 or more years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

49. Project Coordinator

Project Coordinator	
Years of Experience	2 or more years of experience in the field or in a related area.
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager or project lead and reports to a project manager or project lead.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

50. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths, weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

51. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.
- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.

Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

52. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

53. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety answering points and first responders.

54. Radio Engineer

Radio Engineer	
Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues--analyzes results and impacts.