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SKILL LEVELS FOR JOB TITLES

| Skill Level | Level Number ² | Typical Experience ³ | Typical Skills ¹ |
|-------------|---------------------------|---------------------------------|---|
| Junior | 1 | 1 - 3 years | Individual is able to work successfully with guidance; is able to manage simple to medium complexity work efforts; does not provide leadership to others |
| Mid-Level | 2 | 4 - 7 years | Individual is able to work without assistance; is able to manage medium complexity work efforts; has some industry experience; can provide limited leadership to others |
| Senior | 3 | 8 - 11 years | Individual is able to work without assistance; is able to manage complex work efforts; may have advanced education; may have deep industry experience; is expected to provide leadership for others |
| Expert | 4 | 12+ years | Individual is able to work without assistance; provides leadership for others; able to manage highly complex work efforts; may have advanced education; has extensive industry experience |

Notes:

1. Skill Level generally defines the level of knowledge, expertise and/or experience necessary in the key skills or technologies for a given role.
2. Level Number generically maps to the skill level and typical number of years or experience. Customers are encouraged to consider all three factors as it relates to the level of work that is expected of the resource to be engaged.
3. Typical Experience is generally representative of the number of years of experience to acquire the skills and experience levels listed. It is one factor to consider when defining the role being filled. Customers should use their best judgment in defining the Skill and Experience Level that is most appropriate for the work and role that needs to be filled when creating a request for a resource.

APPLICATIONS

1. **Business Analyst (Skill level 1, 2, 3, 4)**

The Business Analyst plans, develops, tests and documents computer programs, applying knowledge of programming techniques and computer systems: Evaluates user request for new or modified program. Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Leads analysis and solution definition. Understands the business issues and data challenges of the organization. Identifies organization's strengths and weaknesses and suggests areas of improvement. Reviews and edits requirements, specifications, business processes and recommendations related to proposed solution. Develops functional and non-functional specifications, uses cases and system design specifications for systems. Conducts effective joint applications development and brainstorming sessions. Interviews and surveys subject matter experts and stakeholders to gather requirements. Understands the agile development and the universal modeling language.

2. **ERP Analyst (Skill level 1, 2, 3, 4)**

The ERP Analyst 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. Analyzes business processes and establishes protocol to improve performance. Reviews and maintains documentation specifications and operating procedures.

3. **ERP Database Administrator (Skill level 1, 2, 3, 4)**

The ERP Database Administrator 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.

4. **ERP Developer (Skill level 1, 2, 3, 4)**

The ERP Developer 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. Manages the implementation of ERP software modules, interfaces, conversions, or technical infrastructure.

5. **Geographic Information System Analyst (Skill level 2, 3, 4)**

The GIS Analyst is responsible for performing a wide variety of production tasks for Geospatial projects and data management. They assist and support Project Managers and Developers in meeting project deliverable requirements and deadlines. Use various GIS software as well as various geographic data formats and standard data conversion and transformation methods, for geographic analysis. Perform data model design and development tasks. Develop Geographic Databases through use of GIS/GPS and advanced technologies for specialized purposes. Update Geospatial data on an as-needed basis. Create maps, reports, and presentations in support of various GIS and technology projects. Understanding and implementing ESRI versions and versioning schemes. Writing end user documentation as necessary. Provide on-going support for GIS programs and functions requiring programming and analysis. Troubleshoot problems

associated with existing GIS applications, tools and data. Maintains and updates software used in geographic data input, analysis, and reporting. Recommends improvements or changes to GIS software to increase workflow efficiency. Resolves system outages or performance issues.

6. Geographic Information System Developer (Skill level 2, 3, 4)

The GIS Developer performs work that is related to the development, integration, and implementation of GIS systems and databases; programming to create, maintain, display, and update the enterprise geographic information system; implementing GIS analysis and mapping solutions and other technical work-related to GIS; creating new data products using various GIS software desktop and web platforms for a variety of projects and work efforts; performing a variety of analysis tasks that are related to the development and implementation of the GIS system; and carrying out GIS best practices. Troubleshoot and resolve technical issues with geospatial applications to include mobile systems; communicate with internal and external technical resources to resolve end-user issues; develop data quality assurance methods; develop and maintain automated processing workflows; and create maps, reports, and presentations in support of various GIS and technology projects.

7. Graphic Designer (Skill level 2, 3, 4)

The Graphic Designer designs art and copy layouts for material to be presented by visual communications media such as books, magazines, newspapers, Internet websites, television, and packaging. Develops materials manually or utilizes graphic software to design and produce finished artwork or product. Plans content, graphic aspects, and presentation of material, product, or service.

8. Mobile Specialist (Skill level 2, 3, 4)

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. 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.

9. Programmer Analyst (Skill level 1, 2, 3, 4)

The Programmer Analyst converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives from systems analyst detailed workflow chart and diagram to illustrate sequence of steps that program must follow and to describe input, output, and logical operations involved. Analyzes workflow chart and diagram, 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 logical flow chart to language processed 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. Writes instructions to guide operating personnel during installation and maintenance of the

application. May work with business analyst to obtain and analyze project specifications and flow charts. May direct and coordinate work of others to write, test, and modify computer programs.

10. Applications Architect (Skill level 2, 3, 4)

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

11. Software Tester/QA Analyst (Skill level 1, 2, 3, 4)

The Software Tester/QA Analyst develops, publishes, and implements test plans. Writes and maintains test automation. 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.

12. System Analyst (Skill level 1, 2, 3, 4)

The Systems Analyst specializes in analyzing, designing and implementing information systems. Systems analysts assess the suitability of information systems in terms of their intended outcomes and liaise with end users, software vendors and programmers in order to achieve these outcomes. Plans a system flow from the ground up. Writes technical requirements from a critical phase, interacts with software architect to understand software limitations. Helps programmers during system development, e.g. providing use cases, flowcharts, UML and BPMN diagrams. Documents requirements or contributes to user manuals. Knowledge of the limitations and capabilities of computer systems, 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. Identify, understand and plan for organizational and human impacts of planned systems, and ensure that new technical requirements are properly integrated with existing processes and skill sets.

13. Technical Writer (Skill level 2, 3, 4)

The 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. The experienced TTW 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. Ensures messages and terminology is consistent across all written materials. Identifies, creates, revises, and maintains documentation and templates needed by the Application Teams.

14. Cloud Architect (Skill level 2, 3, 4)

The 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. Has expert knowledge in Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

15. Cloud Engineer (Skill level 2, 3, 4)

The 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.

16. Cloud Administrator (Skill level 2, 3, 4)

The Cloud Administrator brings expertise in the most senior capacities in supporting and maintaining Cloud-based architecture in both implementation and post-implementation roles. An ideal person in this role will have worked with a variety of programming languages and infrastructure platforms. The role could involve working with outside vendors tasked with implementation of a new cloud-based environment and transition to administrate after the completion of implementation. This can include support of SaaS and SOA solutions.

17. Cloud Developer (Skill level 2, 3, 4)

The Cloud Developer brings expertise as a programmer and designer for Cloud Services. A Cloud Developer has experience implementing and developing applications to interface with Service Oriented Architecture (SOA) and other offerings from the major Cloud Service Providers. Cloud Developers are responsible for analysis, design, coding, of all application code. Cloud Developers typically are involved in maintenance, enhancement and development work. Cloud Developers have a range of skills and knowledge of the technologies used and applications supported by the Application Team. The Developer works with the Business Analyst, Application Architect and other Application Development Team members on an as-needed basis to ensure that design and code meets customer requirements. May also need to work with SaaS and Cloud service providers.

18. User Experience Analyst (Skill level 2, 3, 4)

The User Experience Analyst analyzes current systems and product information and how they are used by consumers, and recommends interface designs based on understanding of users' needs. Researches system and product usability; interviews consumers to understand their needs; identifies usage patterns of users through surveys, log analysis, task analysis, and field observation; determines users' needs and presents findings to management, the product development team, and internal stakeholders. Documents suggestions and requirements for improving user experience for a product. Designs and develops new and improves existing products and applications that best meet

consumers' expectations and desires. Presents product and system solutions, ideas, and recommendations to the product development team and internal stakeholders that align with user needs and serve organization requirements.

19. UI/UX Designer (Skill level 2, 3, 4)

The UI/UX Designer provides user-centered interaction and visual design methodology to improve the usability, ease of use, and enhance appeal, and maximize functionality provided through the interaction between the customer and a product or service, addressing all aspects of a product or service as perceived by users. Implements interaction design and visual design as part of a team of a multi-disciplinary team, including various designers, applying skills to a website or computer product, working primarily with navigation structures and interface functions. Designs the visual layout for software Web applications which leverage emergent technologies, electronics, and/or desktop and mobile devices. Researches interaction design and technology trends. Develops the look and feel of a specific computer interface, and navigates the functionality of that interface, maximizing the potential of human-computer interaction. Applies user experience (UX) research and design methodologies throughout all phases of projects.

20. UI/UX Developer (Skill level 2, 3, 4)

The UI/UX Developer designs, develops and implements cross-browser and cross-platform user interface, such as graphics and multimedia, for web applications, web pages and web components. Performs complex application programming activities in the latest technologies: Angular, Typescript, Node.js, HTML, CSS, and more. Creates features that are scalable, accessible and render effectively across multiple browsers, operating systems, and device types (Desktop, mobile, tablet, etc.). Collaborates with product owners, designers, and other developers on different permutations to find the best solution possible. Ensures components are fully automated with unit and functional testing. Identifies ways to improve upon the existing components, making them more easily consumable to improve functionality and the customer experience.

DATA MANAGEMENT

21. Data Warehouse Architect (Skill level 2, 3, 4)

The Data Warehouse Architect designs, develops, and implements the data architecture for a data warehouse. 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.

22. Data Warehouse/Business Intelligence Developer (Skill level 2, 3, 4)

The BI/Data Warehouse Developer is responsible for the successful delivery of business intelligence information to the entire organization and is experienced in Data Warehouse and BI development and implementations. Gathers business requirements and creates technical designs. Designs, develops, and supports new and current ETL processes employing industry standards and best practices to enhance loading of data from and into different source/ target systems. Provides support to the organization's business requirements in the application and consumption of information from the Data Warehouse. Review, analyze, modify, and create ETLs, testing, debugging, integration and implementation processes. Documenting technical needs for ETL processes and databases, and ensuring optimal technical infrastructure is utilized.

23. Database Administrator (Skill level 1, 2, 3, 4)

The Database Administrator is 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. 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). 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. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Modifies data base programs to increase processing performance, referred to as performance tuning.

24. Database Architect (Skill level 2, 3, 4)

The Database Architect designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Develops strategies for data acquisition, archive recovery, and implementation of a database. Analyzes organization's business requirements for database design, and executes changes to database as required.

25. Data Analyst (Skill level 2, 3, 4)

The Data Analyst assesses complex data systems and programs in support of ad-hoc and standing management or customer requests. Creates programs, methodologies, and files for analyzing and presenting data. Examines data quality, applications, and functions. Produces output and sustains operation. Researches new data sources and analytical tools. Contributes to new product development and improvement in product delivery and presentation. Develops awareness of and familiarity with issues and events affecting organization, department, and/or customer. Uses and supports database applications and analytical tools. Uses timely and appropriate participation of users/customers in data collection and query systems.

26. Data Scientist (Skill level 2, 3, 4)

The Data Scientist collects and analyzes statistics and information from multiple sources to spot trends and to gain maximum insight that can give the company a competitive advantage, and communicates informed conclusions and recommendations across an organization's leadership structure. Strategizes and identifies unique opportunities to locate and collect new data, explores and mines data from many angles, and determines what it means. Communicates data findings to both business and IT leaders to influence how an organization approaches and meets business challenges of an evolving customer base and changing marketplace, using strong business acumen. Finds and recommends new uses for existing data sources; designs, modifies, and builds new data processes; and builds large, complex data sets.

GOVERNANCE

27. IT Governance Analyst (Skill level 2, 3, 4)

The 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.

28. IT Purchasing Analyst

The IT Procurement Analyst will be responsible for purchasing a wide range of information technology goods and services through a variety of purchasing options. Follows procurement guidelines, selects appropriate procurement method, processes and maintains electronic procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Performs 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 Public Procurement Act and the eVA system very helpful. Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management and related bookkeeping/governmental accounting/fiscal procedures.

IT MANAGEMENT SERVICES

29. Business Continuity Planner (Skill level 2, 3, 4)

The Business Continuity Planner 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.

30. Business Process Engineer (Skill level 2, 3, 4)

The Business Process Engineer 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.

31. Enterprise Architect (Skill level 2, 3, 4)

The Enterprise Architect 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.

32. IT Auditor (Skill level 2, 3, 4)

The IT Auditor 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.

33. IT Strategist (Skill level 2, 3, 4)

The IT Strategist 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.

34. IT Trainer (Skill level 2, 3, 4)

The IT Trainer designs, develops and delivers IT Training through a variety of channels – classroom, CBT, seminars. 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. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

35. IT Sourcing Consultant (Skill level 2, 3, 4)

The IT Sourcing Consultant 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 SECURITY

36. IT Security Analyst (Skill level 1, 2, 3, 4)

The IT Security Analyst monitors and advises 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. Coordinates and executes IT security related projects for the agency. Coordinates response to information security incidents. Develops and publishes Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with Commonwealth IT Security policies, standards, and guidelines. Conducts campus-wide data classification assessment and security audits and manages remediation plans. Collaborates with IT management, Internal Audit, and VITA to manage security vulnerabilities. Creates, manages and maintains user security awareness. Conducts security research and keeps abreast of latest security issues. Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

37. IT Security Architect (Skill level 2, 3, 4)

The IT Security Architect establishes 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

38. Cybersecurity Engineer (Skill level 2, 3, 4)

The 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.

39. IT Security Auditor (Skill level 2, 3, 4)

The IT Security Auditor plans, executes and leads security audits across an organization. Inspects and evaluates information systems, management procedures and security controls. Evaluates the efficiency, effectiveness and compliance of operation processes with security policies and government regulations. Reviews or interviews personnel to establish security risks and complications. Executes and properly documents the audit process on a variety of computing environments and computer applications. Assesses the exposures resulting from ineffective or missing control practices. Accurately interprets audit results against defined criteria; weighs the relevancy, accuracy and perspective of conclusions against audit evidence. Provides a written and verbal report of audit findings. Develops rigorous "best practice" recommendations to improve security on all levels. Requires advanced knowledge of security standards and progressive experience performing security audits.

PROJECT MANAGEMENT

40. Project Coordinator (Skill level 2, 3, 4)

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.

41. Project Manager (Skill level 1, 2, 3, 4)

The 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.

Can provide 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. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers.

https://www.vita.virginia.gov/media/vitavirginiagov/it-governance/psgs/pdf/Project_Manager_Selection_and_Training_Standard_CPM_111.pdf

42. Program Manager

The Program Manager 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.

ARTIFICIAL INTELLIGENCE AND ROBOTICS

43. Artificial Intelligence Engineer (Skill level 2, 3, 4)

The Artificial Intelligence Engineer develops and utilizes simulations and models. Evaluates tools, technologies, architectures, models, and test results. Heads meetings regarding AI with external parties and internal business-embedded innovation teams. Collaborates with lead engineers to define subsystem requirements and acceptance criteria.

44. Robotics Software Engineer (Skill level 2, 3, 4)

The Robotics Software Engineer writes and programs software used to control, manipulate and operate robots and robotic equipment. Maintains existing code and creates new code bases. Defines the architecture and general software design utilized in robotic machinery. Designs, codes and debugs to ensure robots are stable and optimized.

INFRASTRUCTURE

45. Help Desk Analyst (Skill level 2, 3, 4)

The Help Desk Analyst provides 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.

46. Technical Support Analyst (Skill level 2, 3, 4)

The Technical Support Analyst 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. 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.

47. System Administrator (Skill level 2, 3, 4)

The System Administrator is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related 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 and 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.

48. Network Administrator (Skill level 1, 2, 3, 4)

The Network Administrator installs, configures, and supports 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.

49. Network Engineer (Skill level 1, 2, 3, 4)

The Network Engineer is 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.)

50. Network Architect (Skill level 2, 3, 4)

The 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.)

51. Infrastructure Solutions Architect (Skill level 2, 3, 4)

The Infrastructure Solutions Architect analyzes user requirements, technical specifications and existing technical architecture designs to develop and oversee implementation of architecture for Infrastructures: Confers with technical experts involved to analyze current technical architecture, identify problems, and learn specific technical requirements. Writes detailed description of requirements, systems interactions and interdependencies, and project plans required to deploy chosen design. Reviews computer system capabilities, hardware, and software to determine if requested are possible within existing system, designs changes based on existing infrastructure in order to meet requirements. Analyzes networking and computing hardware and software capabilities and makes recommendations for required components to best deliver services. Prepares workflow charts and diagrams to specify in detail operations to be performed by equipment and computer programs and operations to be performed by systems. 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. 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.

52. Public Safety Consultant

The Public Safety Consultant 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. 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.

53. Radio Engineer

The Radio Engineer 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.