

Systems Programmer/Analyst (12203) (31002632)

GENERAL DESCRIPTION OF WORK

Positions in this banded class perform specialized work in supporting information technology equipment and systems for the business, research, and instructional functions of customers. Work involves the use of software and/or hardware tools to provide ongoing services. Work requires proficiency with core infrastructure elements and understanding of their interrelation in order to provide a cohesive computing environment. Positions install and configure new versions of system-level software and associated programs from vendor releases. Positions demonstrate an understanding of systems software configuration, applications, and space usage to determine impacts as changes and enhancements are made. Work includes optimizing systems performance, troubleshooting systems problems, and analyzing usage and systems load issues of a moderate technical nature. Work may include interaction with customers, technicians, analysts, and specialists to troubleshoot problems related to the use of single and/or multiple information systems. Work may include installation and modification of software and hardware, testing, and documentation on a variety of platforms. Duties may include server and mainframe hardware and operational systems design and implementation, identification of technical trends in problem identification and resolutions, technical knowledge implementation of infrastructures and software for customers at primary site and remote locations across the State. They may have responsibility for technical consultation on minor or moderately complex system problems.

CONTRIBUTING

Functional Competency	Examples of Work	Competencies
Technical Knowledge	Administers single and multi-server systems and selects appropriate tools to develop and apply group policies, package simple and moderately complex applications, and automate client management through system-specific, integrated, or third party tools and applications	<p>Demonstrates functional understanding of server hardware and software operation and administration, basic scripting techniques applicable to the systems being administered.</p> <p>A basic understanding of the systems architecture and how it functions to include the tools available to manage functions within the architecture is required.</p> <p>Ability to assist with design, coding and debugging of operating software. Knowledge of automated operations software.</p> <p>Ability to use available system monitoring tools.</p>
Technical Solution Development	<p>Responds to system problems escalated from front-tier support staff or discovered during routine monitoring of system reports and operations.</p> <p>Troubleshoots and performs root cause analysis of problems, develops solutions for problems within the scope of the position and escalates more complex issues in accordance with established processes and procedures.</p> <p>Delivers feedback to reporting agency(ies) regarding the status of the reported problem or issue.</p>	<p>Ability to make recommendations for enhancements or changes to improve system performance.</p> <p>Ability to assess impact of new technologies on current systems.</p> <p>Ability to identify and understand the normal operating parameters of supported systems, the capability to identify problems, perform basic troubleshooting techniques, and use the knowledge thus obtained to develop and apply solutions to remedy the issue.</p> <p>Ability to formulate verbal or written reports describing the reported problems or issues, their resolution and the impact, if any, of the resolution to the reporting agency(ies).</p> <p>Ability to develop appropriate schema to apply client-oriented</p>

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		applications and solutions to the systems architecture
Technical Support	<p>Performs server administration tasks including but not limited to creating scripts of low to medium complexity to automate routine tasks, creating basic server images and monitoring backup reports, checking system logs, testing and applying patches and installing servers using images created by self or others.</p> <p>Plans and implements basic server hardware and operating system optimization functions.</p>	<p>Ability to provide support to clients pertaining to optimizing systems performance, troubleshooting systems problems, and analyzing usage and systems load issues of a moderate technical nature.</p> <p>Ability to interact professionally and effectively with customers, technicians, analysts, and specialists to troubleshoot problems related to the use of single and/or multiple information systems.</p> <p>Ability to recommend methods of resolving problems to lower level analysts or client representatives.</p> <p>Ability to describe and discuss problems with vendor representatives or higher level technical staff to determine resolution.</p>
Planning & Organizing	Plan and execute work in accordance with established timelines, client priorities. May participate in planning meetings or collaborative teams to contribute to a cross-functional project or to serve as individual contributor	<p>Ability to establish work priorities based on operational and functional needs of the system.</p> <p>Ability to determine operational schedule, monitor system performance, and provide input into plans for updates and enhancements that will not interrupt system usage.</p> <p>Must be capable executing project plans of limited complexity, scheduling work, and requesting assistance as needed to complete the project.</p>
Project Management	N/A	N/A
Consultancy	Solicits or otherwise receives input from supported constituents for improvements or updates to current systems, analyzes those needs from a systems perspective to determine appropriate course of action and identify resources required to develop and apply required solution(s) and prepares plan for presentation to management.	<p>Ability to analyze client needs and tailor solution development or recommendation as appropriate.</p> <p>Ability to collaborate with multiple audiences or cross-functional technical teams, possibly to serve as a resource for a particular aspect of a project.</p> <p>Ability to provide consultation on issues and requests from clients that may require the implementation or creation of a custom solution.</p> <p>Ability to consult with decision-makers to discuss alternative technical solutions.</p>

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JOURNEY		
Functional Competency	Examples of Work	Competencies
Technical Knowledge	<p>Research and advise on current security threats and vulnerabilities of supported systems and assist security staff with ameliorating their effects on productivity.</p> <p>Monitor the performance of the systems and network and review the impact of new applications on system performance; consult with agency programmers on applications design to increase performance.</p>	<p>Ability to apply vendor patches, enhancements, and modifications to existing operating and utility systems software.</p> <p>Ability to collect usage & runtime data from performance tools, history reports to analyze and report on system performance.</p> <p>Applies full knowledge of, and practical experience with, a variety of server hardware, operating systems and services.</p> <p>Stays abreast of industry trends, terminology, developments, and security best practices for system data.</p> <p>Comprehensive understanding of the systems architecture and how it functions including the tools available to manage functions within the architecture.</p> <p>Capability to develop appropriate schema to apply client-oriented applications and solutions to the systems architecture.</p>
Technical Solution Development	<p>Collaborate with other internal and external analysts, system administrators and webmasters in the design, implementation and support of complex web services environments, and the support of Windows and *nix-based Desktop Management Technologies.</p> <p>Respond to change requests or feature enhancements; troubleshoot moderately complex and/or non-routine issues. May serve as a resource to junior positions and assist in the solution development of escalated technical problems or projects</p>	<p>Full understanding of the systems interactions, security implications, and programming requirements inherent in server hosted web services.</p> <p>Ability to identify trends in recurring problems and develop appropriate solution.</p> <p>Ability to provide input in establishing technical standards and processes.</p> <p>Ability to integrate knowledge and skills from a range of technologies to address work assignments and problems of moderate complexity on a regular basis. May address problems of greater complexity occasionally.</p>
Technical Support	<p>Design and deploy a cohesive application deployment, imaging, patch management, inventory and metering platform to meet security, compliance, and fiscal responsibility requirements.</p> <p>Design, plan the deployment of, administer and maintain servers hosting services</p>	<p>Ability to resolve problems through systems analysis and troubleshooting procedures independently.</p> <p>Requires a high degree of familiarity with appropriate systems, tools and processes.</p>

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	<p>including but not limited to: file, print, terminal, web, database, remote access, Windows and *nix-based applications and services. Customize, code, test, and debug operating systems or applications such as hierarchical or relational database system software, sophisticated file maintenance routines, telecommunications software, and intricate utilities related to storage methodologies, or related functions.</p>	<p>Ability to select and apply the most appropriate tools and processes to meet the required outcome.</p> <p>Ability to assess risk and apply risk mitigation strategies as appropriate.</p>
<p>Planning & Organizing</p>	<p>Work with service users, internal and external analysts and system administrators to create project plans, establish goals and milestones, and track progress on projects for new or redesigned systems and services.</p>	<p>Ability to reorganize work assignments of operational and applications staff and adapt their workload to unanticipated changes.</p> <p>Ability to apply technical judgment to plan and organize tasks to achieve desired outcomes.</p> <p>Capability to work as a member of a collaborative team to develop, operate and maintain shared systems, applications and services.</p> <p>Ability to solicit input from non-technical clients and from technical staff in order to translate those inputs into a realistic action plan including tasks, required resources, milestones and reporting mechanisms. This includes the effective planning and time management of an employee's individual tasks, contribution to a team effort, and/or may involve occasional project management for projects of moderate scope, or for components of a larger scale/multifaceted project led by others</p>
<p>Project Management</p>	<p>Develop or contribute to development of project plan, manage milestones, and drive projects of limited scope (or components of a larger project) forward.</p>	<p>Ability to develop projects such as systems or software upgrades to incorporate appropriate IT and user staff.</p>
<p>Consultancy</p>		<p>Must be fully capable of applying knowledge and experience to the design, deployment and administration of moderately complex server-based applications and services in assessment and fulfillment of client needs.</p> <p>Ability to analyze and assess client needs to develop effective and appropriate solutions to problems.</p> <p>Ability to consult with decision-makers to explain and recommend alternative technical solutions and capabilities.</p>

ADVANCED

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Functional Competency	Examples of Work	Competencies
Technical Knowledge	<p>Propagate maintenance releases to production services, communicating success or issues.</p> <p>Completely familiar with industry-standard tools and applications and capable of planning their use in conjunction with knowledge developed from other sources</p>	<p>Ability to apply new releases of operating systems and associated software. Thorough knowledge of the resident operating systems, security systems software, and the architecture design of the systems supported; systems are typically of moderate complexity.</p> <p>Ability to research, interpret, and apply technical information to ensure services are properly maintained. Thorough understanding of the complexities inherent in hosting databases and optimizing server and database performance, and the value of maximizing resources and efficiencies. Complete familiarity with applying database troubleshooting and optimization tools and techniques</p>
Technical Solution Development	<p>Administer and monitor database servers and resolve or prevent database-related performance bottlenecks.</p> <p>Document database configuration changes and tuning strategies.</p> <p>Research and apply database configuration values/options that will result in optimal database performances and ensure high availability. Work with data modeling and third party diagnostic/tuning tools to assist performance tuning.</p>	<p>Ability to demonstrate thorough knowledge of technologies and systems in place and to support these technologies.</p> <p>Ability to interact with hardware and software vendors as appropriate to solve problems.</p> <p>Ability to serve as an expert in designing system infrastructure to solve recurring problems.</p> <p>Ability to research and implement appropriate new technologies.</p>
Technical Support	<p>Administer vendor-specific storage units, ensure backups are being created and units are communicating with each other.</p> <p>Maintain, update, and standardize Systems documentation.</p> <p>Administer vendor-specific bladecenters. Monitor and repair any failing components.</p>	<p>Ability to negotiate time and priorities with vendors to achieve problem resolution.</p> <p>Possesses a high degree of knowledge and experience with a variety of vendor-specific hardware, server operating systems and functional processes. Understands systems processes and functions and interprets technical writing and jargon. Capable of translating highly technical information for non-technical consumers.</p> <p>Fully developed capability to administer vendor-specific hardware and operating systems, troubleshoot, diagnose and repair problems of moderate to high complexity routinely</p>
Planning & Organizing	<p>Plan significant upgrades to systems and determine the impact to data, applications, and</p>	<p>Ability to plan task timelines and use of resources.</p>

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	user needs. Independently prioritize one's own tasks and manage time successfully	
Project Management	<p>Plan the application of system changes to minimize impact on client operations and ability to use services.</p> <p>Provide clients with information regarding the changes made to service. Receives client input and translates that input into actionable tasks. Ensures provided resources function efficiently and as required by the requestor</p>	<p>Ability to manage projects that have high impact changes to operating and peripheral systems or the implementation of emerging technologies.</p> <p>Demonstrates effective planning and time management of individual tasks. May also lead a project teams or work groups, serve as a technical expert to management, and/or function in a project management capacity for projects of greater scope or that require more in-depth technical systems knowledge. May be wholly responsible for components of a larger scale/multifaceted project</p>
Consultancy	<p>Provision resources for internal clients as needed (VMs, blades, etc.) for testing and development. Assess existing and future needs of client, the impact of inter-related changes, and determines the most appropriate plan for implementation. Offer professional recommendations utilizing an understanding of the market, industry and competitors that have an impact on the client's business. Consult with senior level decision-makers and develop long-range strategic alternatives on an on-going basis.</p>	<p>Researching, interpreting and applying technically complex data to inform individual decision-making or to advise clients.</p> <p>Ability to consult with other specialists, analysts, technicians, and vendors to discuss using new or existing technologies.</p> <p>Ability to consult with senior level decision-makers and develop long-range strategic. Ability to provide expertise and consulting to management representatives on a regular basis.</p>

MINIMUM EDUCATION AND EXPERIENCE REQUIREMENTS

SPECIAL NOTE

This is a generalized representation of positions in this class and is not intended to identify essential work functions per ADA. Examples of competencies are primarily those of the majority of positions in this class, but may not be applicable to all positions. Ability to create and maintain collegial working relationships with customers and co-workers, contribute to a positive and inclusive work environment, and serve as a productive team member is expected in all positions.