

Systems Programmer/Specialist (12206) (31002634)

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 advanced use of software and/or hardware tools to provide ongoing services. They will have an expertise with core infrastructure elements and how they interrelate to provide a cohesive computing environment. Positions install new versions of systems level software and associated programs from vendor releases. This work may be specialized as systems architecture. They must have an understanding of the configuration of the systems software, applications, and space usage is 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 highly 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 creation, installation, and modification of software and hardware, testing, and documentation on a variety of platforms. They may have responsibility for the final technical decision on major systems problems

CONTRIBUTING

Functional Competency	Examples of Work	Competencies
Technical Knowledge	<p>Investigate new ways to adapt existing resources for new and innovative approaches to the organization's needs.</p> <p>Participate in research and development activities with the objective of testing new information technologies to enhance the infrastructure with the ultimate goal of increasing functionality and productivity for the organization.</p> <p>Evaluate new technologies.</p>	<p>Maintain current knowledge of all technologies used in the organization and their inter-relations, and stay abreast of trends in the area of expertise</p> <p>Ability to demonstrate thorough knowledge of technologies and systems in place and to support these technologies.</p>
Technical Solution Development	<p>Design/implement appropriate procedures/policies to address client requests associated with training, security, software installation, receiving/tracking, problem-reporting, usage statistics, etc.</p> <p>Create applications and assign policies for delivery through appropriate deployment methods as needed (e.g.: Microsoft Active Directory, WDS, and SCCM).</p>	<p>Ability to develop innovative solutions and/or designs where appropriate, and/or 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 interact with hardware and software vendors as appropriate to solve problems.</p>

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<p>Technical Support</p>	<p>Provide a wide range of desktop hardware and software support including: testing, installation, management; troubleshooting (network, hardware, and software), error-logging and reporting.</p> <p>Provide 3rd tier support to the Help Desk and backup support as needed for all operational staff in cases of vacancies or problem escalations</p> <p>Document procedures and implementation details associated with the standard computing environment and log accordingly</p> <p>Ensure successful technical backup for organization's file systems, web and database servers, auditing services, printing services, and backup services on organization's servers.</p>	<p>Ability to utilize system level data and listen to symptom descriptions; to analyze problems; to respond effectively and to provide constructive feedback to the client on problem resolution.</p> <p>Ability to provide systems administration and support for the agency or academic setting standard computing environments.</p> <p>Ability to understand internal/external customer technologies and problem resolution techniques. Ability to communicate effectively with customers.</p>
<p>Planning & Organizing</p>	<p>Provide direction to the help desk staff for upcoming deployments, impact, and solution development.</p> <p>Collaborate with server administrator to coordinate administration of file and application servers including: day-to-day account administration, group administration, GPO creation and assignments, and directory/file management, and on-site/off-site backups.</p>	<p>Ability to assist management in establishing work standards, standard processes and references.</p> <p>Ability to develop own work schedule and monitor progress against defined parameters.</p>
<p>Project Management</p>	<p>Provide oversight for project(s) and all related activities in that setting, to include quality assurance and security.</p> <p>Coordinate and manage facilities, equipment, supplies, and related resources as necessary for the project.</p> <p>Complete individual tasks as part of a larger project, or lead a project of limited scope.</p>	<p>Ability to monitor environmental risks, if any, and quality control. Ability to establish a set of tasks and activities associated with an intended outcome and timeline.</p> <p>Ability to ensure actions are performed and/or implemented to achieve the results of the project.</p>
<p>Consultancy</p>	<p>Determine client needs based on current trends in computing and thorough user and task analysis, with all appropriate considerations for security compliance and best practices.</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 senior level decision-makers to discuss alternative technical solutions and implementation.</p> <p>Ability to understand client programs, organization and culture</p>

JOURNEY

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Functional Competency	Examples of Work	Competencies
Technical Knowledge	<p>Research new and emerging technologies. Keep apprised of developments in virtualization and storage technologies.</p> <p>Administer Active Directory accounts, including permissions and group membership.</p> <p>Collect and utilize appropriate environment, system & subsystem parameters, usage and runtime data from SMF, data from performance tools, history reports, and application architecture to analyze and report on system performance.</p>	<p>Ability to modify complex operating software programming and make sophisticated modifications.</p> <p>In depth knowledge of automated operations software and its functioning related to other software.</p> <p>Ability to serve as a resource in solving problems of high complexity.</p>
Technical Solution Development	<p>Create and test virtual desktop images for employee, student and/or general computing.</p> <p>Assist helpdesk and desktop support personnel in the troubleshooting and correction of issues related to desktop computing in both physical and virtual infrastructures.</p> <p>Resolve helpdesk tickets to customer satisfaction and realistic expectation. Keep users informed of the progress of unresolved tickets and outstanding issues.</p>	<p>Ability to identify trends in recurring problems and develop appropriate solution.</p> <p>Ability to negotiate time and priorities with vendors to achieve problem resolution.</p> <p>Ability to resolve problems through advanced systems analysis and troubleshooting procedures independently.</p> <p>Ability to develop advanced solutions to improve operational performance.</p>
Technical Support	<p>Install, configure, and manage enterprise-level computer virtualization products (e.g.: ESXi hosts within a vSphere infrastructure), Windows servers, and Unix and Linux operating systems on virtual servers. Apply necessary patches as released by vendors on a routine schedule.</p> <p>Maintain servers, server clusters, and virtualization infrastructure at optimal performance levels through use of standard monitoring systems.</p> <p>Maintain group policies for Windows desktops. Use group policy to install or modify applications for end users. Ensure all data is backed up on a routine schedule and that file restoration from backups can be verified.</p>	<p>Ability to assist management 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.</p> <p>Ability to research and implement appropriate new technologies.</p>
Planning & Organizing	<p>Establish and maintain a method for replicating the production environment for use in testing software updates, OS patches, etc.</p> <p>Work closely with project and product teams to install, patch and upgrade applications as needed.</p> <p>Ensure applications running have the appropriate resources to function at acceptable</p>	<p>Ability to provide regular day-to-day planning and organizing the work of others.</p> <p>Ability to reorganize work assignments of other employees and adapt their workload to unanticipated changes.</p> <p>Ability to apply technical judgment to plan and organize tasks to</p>

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	<p>performance levels.</p> <p>Coordinate port activation with campus networking. Assign/Register IPs as needed/requested.</p>	<p>achieve desired outcomes.</p>
Project Management	<p>Independently manage time and resources to complete project tasks. Position may serve as technical expert for aspects of a larger project, or may lead projects of moderate scope and impact.</p>	<p>Ability to advise others of risks, if any, and quality control matters. Independently manage tasks, deadlines, resources, and activities associated with an intended outcome and timeline.</p> <p>Ability to ensure actions are performed and/or implemented to achieve the results of the project.</p> <p>If serving as project lead, must demonstrate the ability to collaborate effectively with others in the project team, delegate tasks, mitigate risks, and shepherd project to successful completion.</p>
Consultancy	<p>Based on specialized expertise in systems operations, provide guidance into strategic technical systems (e.g. architecture) decisions.</p>	<p>Ability to understand the market, industry and competitors that have an impact on the customer's business.</p> <p>Ability to consult with senior level decision-maker and develop long-range strategic alternatives on an ongoing basis.</p> <p>Ability to analyze and assess client needs to develop effective and appropriate solutions to complex problems.</p> <p>Ability to build client support of IT objectives.</p>
ADVANCED		
Functional Competency	Examples of Work	Competencies
Technical Knowledge	<p>Regularly performs installation, configuration, and maintenance of very complex systems software (inclusive of operating systems and other system level/middleware components).</p>	<p>Expert technical knowledge in the designated areas. Ability to use knowledge of emerging trends to propose improvements and ideas</p>
Technical Solution Development	<p>Create software of moderate to high complexity to integrate systems and automate custom and complex tasks. May be solely responsible for design and integration of college or division server infrastructure, system software, web hosting, and database services.</p>	<p>Ability to design and integrate systems with high visibility and impact to the organization.</p>

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<p>Technical Support</p>	<p>Install, configure, maintain, and troubleshoot all college, division, or agency server hardware, software, networking, and interoperability.</p> <p>Package and distribute software for lab and classroom use.</p> <p>Manage the full life cycle of foundational systems software/hardware components.</p>	<p>Ability to exercise sound judgment and serve as final authority on technical decisions</p> <p>Demonstrate in-depth knowledge of applicable technologies in order to provide the highest tier of problem diagnosis and resolution of systems software.</p>
<p>Planning & Organizing</p>	<p>Contribute to architectural plans as new generations of systems hardware/software are deployed.</p> <p>May manage employee work assignments and schedules.</p> <p>Provide leadership in system migrations and implementations.</p> <p>Collaborate with committees to align unit or division strategies with organization-wide direction and trends.</p>	<p>Ability to provide leadership in long-term planning for the work unit or client.</p> <p>Ability to plan the use of resources, collaborate with customers to minimize system downtime and disruption to business operations</p>
<p>Project Management</p>	<p>Manage infrastructure and middleware projects, and provide support for broader projects that depend on complex hardware/software systems. May often serve with College- or University-wide scope.</p>	<p>Ability to define project scope, establish project milestones, and ensure delivery of successful project outcomes. May be entrusted with projects of considerable scope and complexity.</p> <p>Ability to manage facilities, equipment, and other related resources to meet project goals.</p> <p>Collaborate with work teams as needed and serve as the technical systems expert</p>
<p>Consultancy</p>	<p>Develop solutions to unique and non-standard user requests.</p> <p>Analyze current trends in computing and recommend best course of action to management.</p>	<p>Ability to provide expert knowledge and consultation to organization-wide committees and boards on a regular basis.</p> <p>Ability to consult with senior level decision-makers and develop long-range strategic alternatives on an ongoing basis.</p>

MINIMUM EDUCATION AND EXPERIENCE REQUIREMENTS

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.

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