

Position Description - Final

PD #:

Replaces PD #:

Sequence #:

IT Specialist (NETWORK/INTERNET)

GS-2210-11

Installation:

Major Command:

Region:

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PD Library PD:

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Classified By:

Classified Date:

FLSA:

Drug Test Required:

CIPMS PD:

Career Program:

Financial Disclosure Required:

Acquisition Position:

Functional Code:

Requires Access to Firearms:

Interdisciplinary:

Competitive Area:

Position Sensitivity:

Target Grade/FPL:

Competitive Level:

Emergency Essential:

Career Ladder PD:

PD Status:

MAJOR DUTIES

Summary: Serves as an Information Technology Specialist responsible for planning, developing, implementing and maintaining Network, Internet, intranet, and extranet systems, services, and activities used for the transmission of information in voice, data and/or video. The Internet work requires analyzing and defining network requirements, its architecture and infrastructure; configuring and optimizing network servers, hubs, bridges, routers, and switches; analyzing network workload and monitoring its capacity and performance; diagnosing and resolving network problems and developing backup and recovery procedures; installing, testing, maintaining and upgrading network operating systems software. The Internet, intranet, and extranet work requires determining the design and structure of Internet services, collecting and analyzing Internet service usage and performance statistics, evaluating new Internet services and technologies, and providing technical advice to content providers. Both specialities require the incumbent to ensure rigorous application of security assurance policies, principles, and practices in delivery of network and Internet services. In this capacity, performs the following duties:

1. Plans, analyzes, coordinates and accomplishes studies to identify and determine a District

organization's network administrative and technical requirements and specifications, equipment configuration and facilities necessary to develop, modify, and implement network system and service which effectively supports organizations of the District. Takes action to design, develop, implement, monitor, and maintain network systems/network activities/services to support District customer needs. Continuously coordinates studies and plans with District supervisors as well as administrative and technical personnel. Develops strategies to accommodate supervisors' needs, prepares drafts for their review by the using organization (s), and incorporates their review comments and concerns. Prepares study summaries for comparison of alternatives pertinent to the economic justification of costs, time, and equipment usage, and generates queries and reports. Develops recommendations concerning major project ramifications and to offset adverse impacts. Develops work plans, program logic, special instructions, and detailed flow charts covering processes and network services needs.

2. Develops/implements configuration management plans for local area networks (LANS) and wide area networks (WANS) and creates network maps for establishing/maintaining an organization's network architecture, infrastructure, topology, protocols, and connectivity between remote sites.

a. Evaluates network software, hardware, and communications link, specification and installation. Analyzes, assesses and interprets the LAN/WAN user and administrator requirements for software to be used in the foreseeable future. Selects special multi-user software that meets LAN/WAN needs. Analyzes special hardware such as microcomputers, minicomputers, mainframe and terminal connections to the LAN/WAN/ network communications equipment.

b. Participates extensively in the operating LAN/WAN environment. Analyzes, assesses, recommends, and provides for user access to the LAN/WAN via the addition of nodes or via reorganizing existing nodes. Identifies and assesses network performance for hardware/software utilization. Fine-tunes the system, hardware, software, etc., to increase systems performance. Ensures appropriate system hardware maintenance, system file backup, system mass storage utilization, and system hardware, software, and data security. Develops programs for user interaction with the LAN/WAN. Reviews and recommends development of shared databases and shared application systems developed for implementation via the LAN/WAN. Monitors application databases and data file utilization by LAN/WAN end users via system utilities to ensure appropriate use of the District's information resources. Initiates corrective actions to resolve noncompliance issues. Develops documentation (written or automated) to provide LAN/WAN users with information necessary for LAN/WAN access and use, software availability and use, shared information availability and use. Develops and provides training programs on the use of LAN/WAN facilities. Plans for and installs original or new releases of existing software for network management purposes. Ensures installation plan includes provision for software testing, user training, application revision, database/data file reorganization and documentation. Plans for and installs hardware addition and/or upgrades. Ensures installation plan includes provision for hardware testing, user training, and documentation. Analyzes and resolves system hardware/software failures. Develops

LAN/WAN standards and procedures including recommended network applications, general purpose software, and generic LAN/WAN attributes and capabilities. Implement security controls for the LAN/WAN.

3. Plans, coordinates and accomplishes studies to identify and determine an organization's Internet administrative and technical requirements and specifications, equipment, and facilities necessary to develop, modify, and implement Internet services, sites, etc., which effectively support organizations within the District. Takes action to design, develop, implement, monitor, and maintain Internet activities/services to support District customer needs. Continuously coordinates studies and plans with supervisors/managers as well as administrative and technical personnel. Develops strategies to accommodate needs, prepares drafts for their review by the using organization(s), and incorporates their review comments and concerns. Prepares study summaries for comparison of alternatives pertinent to the economic justification of costs, time, and equipment usage, and generates queries and reports. Develops recommendations concerning major project ramifications and to offset adverse impacts. Develops work plans, program logic, special instructions, and detailed flow charts covering processes and Internet needs. Monitor program development and tests and debugs programs upon completion.

a. Designs and develops dynamic and static web interfaces using available technology such as HTML, Visual Basic, JAVA, JavaScript, VB Script, etc. Internet/Intranet programming support includes, but is not limited to, Perl, C++, and XML Troubleshoots and resolves technical problems with the design and delivery of Internet services, and evaluates new Internet services and technologies. Participates extensively with other staff members tuning data structures to support information and decision systems in addition to testing, evaluating, and implementing new web-based applications.

b. Participates extensively in administering intranet and Internet web servers ensuring functionality, installing software updates and maintaining server logs. Provides server access to page masters by maintaining user accounts and file permissions. Takes measurements of Internet and intranet activity and technical testing of web servers and capabilities. Ensures security standards are met, monitors system performance, and provides network analysis. Responds to, prevents, and reports attacks upon the system and applies security patches as necessary. Anticipates problem areas, researches trends in system needs, determines when new or additional hardware/software is required. Responsible for ensuring timely customer service and support in order to minimize down time.

c. Consults with Intranet customers and supervisors/managers to evaluate user requirements and advises on design capabilities and maintenance responsibilities. Studies customer requirements, translating them into web design steps, web page formats, and file and directory structures. Determines how web pages should be organized and the procedures to organize and obtain required information. Works with other Information Management Organizations (IMO) areas for web page graphical design.

d. Coordinates with IT specialists and managers at Division levels to obtain information to

interface with systems at those levels to facilitate the acquisition and exchange of Internet information. Serves as a representative at District meetings and seminars designed to arrive at solutions to mutual Internet problems encountered and to provide knowledge and information concerning state-of-the-art techniques, software, and hardware.

4. Develops local guidelines, standard operating procedures (SOPs), bulletins, and flyers concerning the operations/use of District Network Systems/Internet sites, services, and activities. Frequently analyzes problematic provisions or guidance governing standard operating systems and provides assistance and advisory services to any and all District users concerning the resolution of problem areas and the policies, regulations, and provisions of systems. Provides interpretations of higher authority regulations and guidance concerning Network/Internet activities/services/security and coordinates with higher level IT specialists concerning the resolution of problem areas encountered.

5. Assigns studies or portions of studies and program development to lower grade IT specialists and/or analysts hired under contract. Technically reviews completed work projects and provides technical assistance and guidance as required. May be required to prepare scopes of work and cost estimates for the work to be contracted; ensure that the contractors' progress complies with contract terms; certify work accomplishment, review, and recommend approval of requests for payments; ensure compliance with the terms and provisions of contracts and compliance with specifications; recommend approval or disapproval of completed contractor work and takes necessary action to resolve problematic issues. Within the District's IT policy and planning function, incumbent accomplishes technical, analytical and advisory functions pertinent to the development of local policies, plans, and processes, and ensures that the District's IT program is in compliance with higher authority, policies, and guidelines.

Performs other duties as assigned.

FACTOR 1. Knowledge Required by the Position FL 1-7 1250 POINTS

Knowledge of and skill in applying network systems design, development, installation, operations, and maintenance concepts, methods and procedures; the District's network architecture, topology, protocol and remote access technology, configuration management and LAN/WAN concepts, methods and practices sufficient to provide network service that supports the organizational needs of the District's business requirements; to plan, design, develop, and integrate network systems with existing and/or planned network infrastructure; establish connectivity between remote sites; create network maps; configure hubs, switches and routers; analyze network traffic patterns and install network hardware/software fixes and upgrades.

Knowledge of and skill in applying IT concepts, principles, methods, and practices along with current programming (C++, XML, JavaScript, etc.) languages. Internet technologies and protocols in order to analyze the Internet potential of systems, networks, and data; new and emerging information technologies and/or industry trends; and the District's IT infrastructure for creating Internet applications that enhance user-developed content; meeting business and

technical requirements; providing Internet services that optimize customer experience; and creating web pages.

Knowledge of and skill in applications system design and Application Programming Interfaces (API) for web-based interfacing. Knowledge of standardized administrative practices and procedures to work with District staff during data gathering phases of assignments. Knowledge of standard Internet protocols (Transmission Control Protocol/Internet Protocol - TCT/IP); Security Sockets Layer (SSL) and encryption; IT systems and a wide range of computer techniques, requirements, methods, and procedures including familiarity with the approaches of the District, other districts within the Corps, and the private sector. Such knowledge is necessary to better analyze, evaluate, and make recommendations on major aspects of the District's web server environment.

Knowledge of information technology resources and infrastructure including automated systems, equipment, hardware and software, system technology, provisions, and requirements of a variety of standardized administrative and technical systems to serve as a technical specialist within the District concerning the application, implementation, and maintenance of IT system, services/activities, etc.

FACTOR 2. Supervisory Controls FL 2-4 450 Points

The supervisor assigns functional responsibilities, outlines overall objectives to be achieved, and the resources available for use. Assignments may come directly from the user/customer or from the supervisor. The incumbent has continuing responsibility for assignments pertaining to an organization's Network/Internet activities. Consults with the supervisor on matters pertaining to time frames, scopes of assignments, stages in the study or application process and possible approaches on controversial or problematic situations. Independently applies and interprets guidelines and regulations and plans, designs, and organizes projects associated with assignments. There is a continuing requirement for coordination (users and other impacted IT specialists) and the incumbent independently plans and carries out the necessary coordination including that involving lower-level IT specialists and/or efforts of contractually employed persons. The incumbent independently provides advice and guidance within the District and resolves problem matters. Completed work is typically accepted without technical change but is reviewed for effectiveness in meeting user requirements, conformance with policy, accomplishment within acceptable time frames, and customer satisfaction.

FACTOR 3. Guidelines FL 3-3 275 Points

Guidelines include agency regulations, manuals, and policies which provide overall goals and define limitations and overall objectives; USACE regulations, policies and procedures concerning Network/Internet activities and all District automated systems; and a variety of manufacturers' manuals and handbooks pertaining to the wide range of hardware and software in use in the District. Must use judgment in selecting the proper guide to apply to assignments and interpreting such guidelines, as necessary to fit differing conditions. Uses precedent approaches

making adaptation to compensate for differing conditions. Prepares guides, SOP's, bulletins and fact sheets for distribution and use within the District in performing Network/Internet operation and maintenance. Applies judgment to anticipate problems, research trends in state-of-the-art technology, and develop special adaptations to satisfy requirements.

FACTOR 4. Complexity

FL 4-4 225 Points

Assignments involve the analysis, study, and consideration of a wide range of automation policies, business processes, hardware and software; the audit of District IT systems and operations; and the study of different and unrelated processes and methods to ensure compliance with Division and higher-level organization regulations and policies and ensure that existing District systems fulfill District IT needs and provide necessary capabilities. Additionally, work includes providing advisory services pertinent to District IT Network/Internet needs and problem resolution leading to the presentation of findings and recommendations to the supervisor and District customers. Work is made complex by continuing changes in District business requirements and the rapid changes in the IT environment. The incumbent must remain updated on changing the most recent developments in IT and continuously evaluate changing future organizational data needs. The incumbent must continuously evaluate the effectiveness of current policies and ways of doing business; and develop and recommend methods and techniques for accommodation and improvement of customer IT system needs and requirements. Projects require the consideration of state-of-the-art technology as well as numerous USACE-wide standard systems and hardware platforms requiring the use of a variety of techniques and methods to develop recommended alternatives to best fit District requirements.

FACTOR 5. Scope and Effect

FL 5-4 225 Points

The assignments of this position involve work in the District's Network/Internet functions, needs, plans, situations, and problems. The work involves establishing criteria, formulating projects, troubleshooting server hardware/software and reviewing server loads and recommending load balancing and verifying system backup and restoration, developing and refining Network/Internet services (web sites, list servers, etc.); consulting with program specialists in developing new services and/or enhancing existing services; planning, coordinating, and conducting in-depth studies and developing strategies/plans to satisfy the District's Network/Internet needs.

The work facilitates the efficient delivery of program information and exchange of information between clients and organizations (e.g., within the District, with other districts, Division, higher-level organizations, and the private sector).

FACTOR 6 Personal Contacts

Fl 6-2 & 7-b

75 Points

FACTOR 7. Purpose of Contacts

Contacts are with IT specialists within the employing organization, contractor management and

specialist personnel, users within the District in any of the division and separate offices. Contacts are also with information managers and specialists at the Division headquarters level and limited contacts with specialists and managers of IT at the HQ, U.S. Army Corps of Engineers (USACE) level in moderately structured settings. Level 2

Contacts are to exchange information, determine IT Network/Internet requirements, coordinate study work processes and problem resolution matters, plan study processes, and provide progress reports. Additionally, contacts are to advise customers concerning IT policies, methods, and procedures, and system IT techniques, short- and long-range action plans, changed policies or provisions of guides or to resolve inequities and incompatible situations involved with the Network/Internet system(s). Contacts with HQ USACE are to obtain and provide information concerning the use of standard USACE-wide systems, coordinate IT plans, and obtain and provide information concerning IT situations that arise. Level b.

FACTOR 8. Physical Demands FL 8-1 5 Points

Work is sedentary in nature.

FACTOR 9. Work Environment FL 9-1 5 Points

Work is performed in a typical office setting.

TOTAL POINTS: 2,510
GS-11 RANGE: 2,355 TO 2,750