OPERATING SYSTEMS ADMINISTRATOR

DEFINITION

Supervises, plans, coordinates, and directs the configuration, development, and implementation of Enterprise Servers, Storage, and Operating Systems (LINUX, WINDOWS, VMware, Citrix Xen) cloud deployments, and related infrastructure, and serves as a liaison amongst the applications, data base, operating systems, project management, and administrative management staff.

TYPICAL DUTIES

Supervises and participates in the selection of hardware and software platforms for District Enterprise Systems.

Defines and supervises work related to the design and acquisition of reliable, scalable, accessible and secure storage systems, enterprise servers, networks, peripherals, backup/restore systems and the management software required to maintain and monitor the above mentioned hardware.

Formulates and develops systems approaches involving advanced and innovative methodologies, concepts, and techniques.

Performs Operating Systems monitoring and performance tuning.

Ensures adherence to industry best practices and technical standards.

Recommends long-range development plans in specific areas of data processing to include SAN, Identity Management, Virtualization, resource utilization, and monitoring.

Analyzes existing hardware products and software packages to determine the feasibility of using existing products rather than developing new systems.

Provides forecasts on capacity planning for each of the District's Enterprise Applications.

Evaluates new applications to determine their effect on existing applications, production hardware, and system software.

Supervises the preparation of technical specifications to be used in proposal or quotation requests.

Consults with users, technical, and management personnel in recommending solutions for projects affecting the Districts enterprise wide servers, storage, and related software systems.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

An Operating Systems Administrator supervises Operating System Specialists involved in the development of advanced data processing systems, preparation of technical specifications, and analysis of large, complex enterprise systems.

The IT Administrator, Shared Technical Services plans, organizes, and directs the activities of a branch that is responsible for the planning, administration, and maintenance of enterprise-wide servers, databases, operating systems and related software and multiple data center operational functions.

An Operating Systems Specialist recommends long-range development plans, prepares technical specifications, and analyzes hardware and software requirements for District operating systems.

SUPERVISION

General direction is received from the Information Technology Administrator, Shared Technical Services or Deputy Director of Data Center Operations. General supervision is exercised over Operating System Specialists and other technical personnel as assigned.

CLASS QUALIFICATIONS

Knowledge of:

Enterprise server, storage, and infrastructure hardware, software, and operating systems such as LINUX, Windows, VMware, and Citrix Xen

Storage Area Networks (e.g. Cisco, MDS 9500) and Enterprise Storage Systems (e.g. HPE 3Par, Infinidat Infinibox, EMC Isilon, Virtual Tape Library, HPE SimpliVity, NetApp, Dell/EMC)

Cloud based Infrastructure providers Amazon AWS, Microsoft Azure, Google Cloud

Operating system monitoring and performance tuning utilities (e.g., BMC, SAR, TOP, TOPAS) and methods

Complex information technology operating, database, and applications systems (e.g., Windows Server, Domain Controllers, Windows IIS, Web Logic, SAP, Oracle, DB2, KORN Shell, PERL)

TCP/IP and related devices including NFS and DHCP

HP Openview and its options

LVM setup for clustered hosts (HACMP, Oracle Rac, Oracle ASM, and MSCS)

Security hardening processes and concepts (e.g. IPSEC)

Communications hardware and software (e.g., CSM, switches, gateways)

Data systems analysis and design

Computer hardware and compatibilities including Windows, VMware, open systems, related peripherals, and software utilities

Business and educational data processing applications

Distributed and centralized processing techniques

IP addressing and subnet schemes

Domain name, e-mail, and firewall servers

Project management methodology including planning, costing, and resource management

System virtualization software such as VMWare and Citrix Xen

Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Software as a Service (SaaS) and other related cloud technologies

Ability to:

Analyze the information needs, problems, and procedures of other departments

Evaluate and adapt new data processing techniques

Design and implement technical modifications and upgrades

Prepare work, time, and cost estimates and reports

Develop detailed project implementation plan, scope, and budget

Plan, coordinate, and provide leadership in complex activities involving many participants

Analyze problems in computer operation, program logic, and communications

Prepare long-range plans

Monitor, analyze, and forecast system resources and plan for future growth

Develop processes and procedures that can be audited for compliance with "industry best practice" guidelines

Solve problems involving integration of advanced technology departments

Represent the District at technical meetings

Express difficult concepts clearly and concisely

Analyze and diagnose malfunctions and perform required repairs of computer operation, program logic, and communications

Use the maintenance utilities in repairing system defects and restoring files and file systems

Work effectively without supervision

Maintain effective working relationships with District personnel

ENTRANCE QUALIFICATIONS

Education:

Graduation from a recognized college or university with a bachelor's degree, preferably with a major in computer science, information systems, telecommunications, data processing, electrical engineering, or industrial engineering. Graduate level courses in engineering, computer science, and operations research are preferable. Qualifying experience in addition to that required below may be substituted on a year-for-year basis for the required education provided that the requirement of a high school diploma or equivalent is met.

Experience:

Five years of experience in the design, installation, maintenance, and modification of Microsoft, VMware, and open operating systems software. Two years of this experience must have been as an operating systems professional with major responsibility in a large computerized installation including professional level experience with VMware, Linux (Red Hat or SUSE), or Windows Operating System. At least three years of experience with systems generation, SAN storage systems, enterprise backup/restore systems, dynamic storage and partition allocation processes is preferable (this experience may be concurrent). Any of the above mentioned experience must also include at least two years of performance measurement and systems monitoring techniques, and development of long-range plans for transition to new operating systems or cloud platforms (AWS, Azure). Experience with LAN and WAN infrastructure, SAP support, dump analysis, cloud hosted infrastructure, and Windows Server Operating Systems environment are preferable.

Special:

A valid driver's license to legally operate a motor vehicle in the State of California and the use of a motor vehicle, or the ability to utilize an alternative method of transportation.

SPECIAL NOTES

An employee in this class may be subject to the reporting requirements of the District's Conflict of Interest Code.

This class description is not a complete statement of essential functions, responsibilities, or requirements. Entrance requirements are representative of the minimum level of knowledge, skill, and /or abilities. To the extent permitted by law, management retains the discretion to add or change typical duties of a position at any time, as long as such addition or change is reasonably related to existing duties.

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