

**Position No. 77161**

**Attachment A**

**9. Duties and responsibilities:**

This is advanced professional work primarily in support of Library staff and public microcomputer hardware and software and client/server systems used in the University of Hawaii at Manoa Library. The position is responsible for administering, maintaining, upgrading and enhancing library servers used to deliver web, proxy, print and other shared electronic resources. Position will be responsible for working with other department IT specialists and student assistants to perform installation, configuration, troubleshooting, modification, upgrading, and maintenance of desktop microcomputer workstations and microcomputer peripheral equipment such as printers, barcode readers, digital scanners. This position works in a collaborative team environment with other technical and professional staff within and without the unit to support internet/world wide web connectivity, library services and processing operations.

Work in the unit involves planning, troubleshooting, coordinating, scheduling and participating in maintenance, and expansion of a complex library networking and distributed computing environment. Tasks include participation in the help desk operation which supports students and faculty accessing information resources, library staff performing service, processing and office operations, and faculty using library classroom facilities. Work also includes providing system administration support for Windows and Unix-based servers.

Work entails consultation and coordination with departmental IT and Librarian professionals and utilization of a variety of specialized skills. Tasks will include software installs and updates and tracking licensing compliance; installation, configuration, maintenance and troubleshooting of associated hardware. Responsibilities will include assisting library staff in use of graphical software systems, microcomputers and the Windows environment. Work will include providing ongoing technical support, day-to-day troubleshooting of the desktop/workstation-related equipment. The person filling this position must perform work with initiative, and have the ability to work with people possessing a wide range of knowledge levels. Flexibility and ability to operate independently are essential. Work is performed under general administrative direction with independent initiative and judgement. Supervision received is minimal and non-specific.

Examples of the kinds of equipment and software involved in the position's activities are: UNIX, Windows NT and Windows2000 servers, Windows 9x and 2000 and Macintosh computer workstations, networked printers; server OS and administration software, and other equipment and software related to the activities listed below.

1. Server system administration: Manages, operates, administers NT/Windows2000 and Unix servers. Insures timely installation of OS upgrades, security patches and other operational software. Performs statistical analysis and log checks. Monitors security alerts and integrity of server software and hardware systems. Manages user accounts and access rights. 25%
2. Microcomputer hardware, peripheral devices: Installation, configuration, maintenance: Receives, inspects, tests, inventories; performs installation and configuration of microcomputer systems and peripheral devices (including printers, scanners, barcode readers). Performs routine, ongoing hardware maintenance. Provides microcomputer system and peripheral troubleshooting support. Insures that inventory control is maintained. Participates in the department help desk operation, responding to and resolving hardware problem reports. 25%
3. Microcomputer software: Installation, configuration, and maintenance: Receives, processes, assists with and/or performs installation and configuration of microcomputer software. Provides troubleshooting support especially in the area of software interaction with peripherals (e.g. printing, file transfer). Tracks software license compliance and upgrade statuses. Participates in the department help desk operation, responding to and resolving software problem reports. 25%
4. Writes programs or scripts: to facilitate the functioning of server systems using languages such as Visual Basic, HTML, Perl, JavaScript, SQL, web server applications such as Apache and Microsoft Internet Information Server (IIS), and operating systems such as Solaris (UNIX), WindowsNT/2000. Plans, designs and implements knowledge-base systems using Windows, Microsoft, SQL or other database development tools. 15%
5. Equipment, Software, and New Applications Research: Assists in the research and document preparation for acquisition of new or additional computer systems, system components, software, peripheral devices, and contracts for their maintenance. 5%

6. Staff Training: Trains or participates in the training of library staff to use a wide variety of microcomputer equipment and software. 5%
7. Performs other duties as assigned.

**10. ... Organizational chart ...**

**11. ... Subordinate Positions ...**

This position works in a team environment with other technical and professional staff within and without the unit. There are nearly 450 computer workstations, 9 servers, and 130-plus printers in use in public and staff areas and they are dependent on a wide range of networked services. Cross-training on all Information Technology support responsibilities in the unit is extremely important in order to provide smooth and consistent support operations by the department. The best method for achieving optimal service to the library constituencies served by the unit is via a collaborative rather than hierarchical arrangement of the IT positions.

**12. List equipment that is critical to work performance**

- |  |                                   |                         |
|--|-----------------------------------|-------------------------|
| a. <u>Servers</u> :                    | b. <u>Computer Workstations</u> : |                         |
| Sun web and proxy servers, Windows IIS | Intel Windows microcomputer       |                         |
| Solaris and Linux OS                   | Macintosh microcomputer           |                         |
| Microsoft NT and Windows2000 server    | Sun & Windows2000 server consoles |                         |
| c. <u>Storage devices</u> :            | d. <u>Other equipment</u> :       | e. <u>Peripherals</u> : |
| Floppy disk drive                      | Network router (esp. Cisco)       | Laser & Inkjet printer  |
| Hard disk drive                        | Hub/Repeater                      | Dot matrix printer      |
| Tape drive, ZIP drive                  |                                   | Barcode reader          |
| CD-RW                                  |                                   | Flatbed Scanner         |

**13. Describe the nature and extent of instructions received or guidelines available for performance ...**

Instructions are provided through discussion with department head, collaboration with department information technology and librarian staff, library administrators, faculty and staff, and cooperation with other UH computing staff and agencies. Work is performed under general administrative direction with independent initiative and judgement.

**14. Describe the nature and extent of the review of work.**

Supervision received is minimal and general. Work is reviewed through observation of results and written and oral status reports. Results are expected to be consistent with an intermediate professional skill level.

**15. ... Nature, purpose and impact of contacts with [other] units ...**

Extensive contact and interaction with faculty, staff and students in other library departments in all units of the University of Hawaii at Manoa libraries. Interaction will be in the form of providing support services, planning, implementing and coordinating hardware and software installations, upgrades and configuration assessments as well as providing ad hoc instruction in use of microcomputer hardware and software. The position works with UH Information Technology Services (ITS) computing support staff and student assistants. Substantial contact and interaction with state-wide and national computer vendors, agencies and information providers.

**16. Minimum Qualification Requirements...**

As typically acquired/evidenced by pertinent baccalaureate educational degree and relevant professional experience, possession of the following competencies in technical knowledge, critical thinking skills, communication skills and interpersonal skills:

A. Skills, Knowledge, Abilities

Considerable knowledge of the limitations, capabilities, uses, and service requirements of network servers, microcomputers and allied equipment.

Considerable knowledge or familiarity with Java, JavaScript, Java Servlets, Structured Query Language (SQL), Oracle or SQL Server.

Experience with Microsoft Internet Information Server (IIS) or Apache Web Server Technology  
Knowledge or familiarity with ASP (Active Server Pages) scripting and database creation or Unix-based scripting and query languages (e.g. PERL, CGI) in a web environment.  
Knowledge and experience in the development of web-based forms  
Demonstrated ability to learn and apply new programming languages independently and in a timely manner using books, manuals, and other resources.  
Demonstrated ability to prepare clear instructions and documentation.  
Demonstrated ability to understand installation and configuration instructions for a wide variety of microcomputer systems and peripheral equipment.  
Knowledge of practices necessary for installing, configuring and maintaining computers and peripherals.  
Demonstrated ability to establish and maintain effective working relationships in a positive, service-oriented manner with colleagues, faculty, staff, student assistants, and other users of computer services and equipment including working cooperatively in a team environment to accomplish tasks and to meet deadlines.  
Demonstrated technical skills sufficient to be able to troubleshoot a wide variety of common problem situations encountered in the installation and usage of microcomputer systems, software and peripheral equipment.

B. Additional minimum qualification requirements...

Knowledge of the installation, configuration, administration and maintenance of client/server software used in Windows NT/2000, Solaris UNIX, and/or Linux systems.  
Knowledge of the configuration, administration and maintenance of World Wide Web servers.  
Knowledge of and experience with web browsers, web editing encoding systems (e.g. HTML, XML, DHTML) and software.  
Knowledge of the service requirements of peripheral equipment inter-networked in a TCP/IP environment.  
Demonstrated ability to explain complex technical problems to faculty, staff and student assistants.  
Demonstrated ability to communicate effectively both orally and in writing.  
Demonstrated ability to maintain paper files and prepare written documentation of computing operations; logs of daily activities and reports of projects.  
Ability to work outside normally scheduled work hours including evenings and weekends as directed.

C. Desirable Qualifications...

Education: Course work in fields related to the programs or systems which are the subject of position.  
Experience: Functional knowledge of software for developing Web-based services or applications. At least two years of responsible professional experience in installation, configuration, management and troubleshooting of microcomputer systems, networked printers and/or with system administration of Unix and Windows servers; or any equivalent combination of education and experience.