



JOB FAMILY CONCEPT

This job family consists of eight levels distinguished by the complexity of the responsibilities assigned and characterized by the type of equipment, operating systems or subsystems supported. This job family is distinguished from the Professional Track in that its main emphasis is on installing, maintaining, and troubleshooting network and information technology systems and assisting with their on-going use and operation. The Professional Track emphasizes system design, programming, and large project management. However, Technical Track positions may perform elements of systems analysis and administration.

Positions fall into two broad categories (1) operations which involve technical support in completing productions requirements for reports and other batch processing services provided by a computer operating system and (2) technical support which involves highly technical work in implementing and maintaining IS systems.

Responsibilities may include performance or supervision of operational or highly technical work in implementing and maintaining personal computer systems, local area networks, customer workstations, network components, and other automation equipment.

(Data entry and word processing are administrative tasks rather than technical and are not included in the information systems job families.)

Positions in this job family assist with or are responsible for the following activities:

- Monitor computer operations functions.
- Stage production runs and maintain production schedule.
- Operate personal computers and equipment.
- Provide software and equipment instruction to users.
- Maintain accuracy of database information.
- Implement and maintain personal computer systems, local area networks, customer workstations, and network components.
- Support Micro-computer, LAN/WAN, audio/video teleconferencing, and related networks.
- Configure personal computers.
- Set up networks.
- Lead or supervise staff.



TYPICAL FUNCTIONS

[Note: A single position may involve one or more the functions listed, and may include functions not listed.]

- Completes production requirements for reports and other batch processing services provided by computer operating system. Operates a variety of data processing equipment, terminals, printers, consoles or other peripheral devices, reviewing and analyzing job requests, determining production requirements, conferring with users, monitoring jobs in process, opening and closing data bases, monitoring jobs within the central processing unit, identifying problems, initiating corrective actions and maintaining tapes, discs, production manuals and other materials.
- Completes cable installations, addressing of controller/director configurations and IPLs of various controller equipment; completes regularly scheduled systems checks of UPS, fire prevention systems, water detection systems, generator systems, chiller systems, and physical security systems. Documents and prepares operational files/manuals of applications, hardware and software processes; maintains library of tapes, discs, and other materials.
- Performs highly technical responsible work in providing computer services and office automation support related to: implementing and maintaining personal computer systems, local area networks, customer workstations, network components, other automation equipment and devices, and/or configuring audio/video equipment for network use. Diagnose and resolve technical problems with applications and software, customer workstations, servers, network components, office automation equipment and related systems and devices.
- Serves as a specialist in the various electronic data processing systems; makes recommendations regarding training and equipment needed for office automation; maintains security of computer identifications and/or passwords; changes tapes as needed. Maintains computer equipment, printers and other devices. Assists in the development and placement of new forms and documents on the system.
- Confers with and trains users or reviews requests for services or other information to identify requirements for information services; coordinates with operations or applications staff, contractors, or vendors as needed to provide required services or support.
- Coordinates requirements for testing, production, scheduling and other actions between technical and operations units; assists in reviewing and analyzing problems and determining solutions.



- Provides network support to operational computer networks by assembling and configuring network components and associated services; sets up and maintains basic network operations, including assembly of network hardware, troubleshoots problems and provides assistance to the network administrator.
- Monitors network; diagnoses and corrects problems to ensure that network is available to all system users and resolves data communications problems
- Plans, coordinates, and implements security measures to safeguard information in computer files against accidental or unauthorized modification, destruction, or disclosure; regulates access to computer data files, monitors data file use, and updates security files.
- Develops, writes, and edits computer-related technical and administrative documentation and publications.
- Installs and repairs data communications lines and equipment for computer system.
- Supervises operational and/or network staff engaged in operating, monitoring or installing data processing or communication systems. Develops annual employee work plans. Coordinates staff training to ensure technical knowledge is maintained at the level necessary to use current hardware and software, and retain a high production level. Recommends hiring selections, evaluates performance, provides staff feedback and initiates corrective action when necessary.

LEVELS AND COMPETENCIES

The primary distinction between levels is reflected in the Level Descriptors. As levels increase, scope, complexity and degree of independence increase. Higher levels may perform duties of lower levels. Education and experience are stated at the minimum threshold for the level. Additional education or experience may be desirable for some positions.

This job family consists of eight levels – four operations levels and four network levels:

Operations Levels: 1-4
Network Levels: 5-8

Level 1 – Operations
PCLS: 02061

Grade 75
Non-Exempt

Descriptors

Receives direct supervision from supervisor or team leader. Scope of tasks is somewhat limited. Normally has access to higher-level technical staff for assistance in problem resolution. Generally works within well-defined guidelines in supporting computer system operational activities.



Completed assignments are reviewed for conformance with timelines, standards, policies and procedures.

Knowledge, Skills and Abilities

Demonstrated general working knowledge of data processing functions, computer system operations, telecommunications networks and a variety of basic software applications. Ability to

operate a variety of personal computers and related equipment. Ability to interpret system data structures, provide training support and act as customer advocate.

Experience

Work in an IS or telecommunications environment, which provides ability to operate a variety of personal computers, familiarity with applications, and telecommunication functions, is required.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of telecommunications, and functions of IS systems may substitute for experience at Level 1.

Level 2 – Operations
PCLS: 02062

Grade 76
Non-Exempt

Descriptors

Work is performed under general supervision. Tasks often do not have clearly defined processes. Applies considerable analysis to resolve significant operational problems. Complicated or unusual problems are referred to supervisor. Installs, maintains, updates, repairs desktop computing hardware and software. Functions include equipment logistics, system setup and configuration, system security, software installation, preventive maintenance, attaching workstations to networks, Internet, and departmental and campus LAN server.

Knowledge, Skills and Abilities

Demonstrated problem solving skills in the areas of data processing functions and computer system operations at the fully qualified level. Ability to identify and resolve operational problems. Ability to maintain security integrity of computer facility and act as system administrator for multiple servers and software packages. Ability to maintain hardware for all computer systems; perform major system hardware and software troubleshooting; perform extensive groundwork for development of test data and test criteria to debug software systems including verification of layered software.

Experience

Experience in networks and information technologies including hardware and software, network and workstation configuration, system administration, database development and administration, data and network security, documentation, programming languages, and elements of system



analysis and integration. Experience with PC platforms, configuration of workstations and devices, application of diagnostic utilities, and operation and troubleshooting methodologies of related applications.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of telecommunications, and functions of IS systems enabling incumbents to function at the required level may substitute for experience.

Level 3 – Operations

PCLS: 02063

**Grade 78
Non-Exempt**

Descriptors

Work is performed under administrative supervision. Tasks often do not have clearly defined processes. Analyzes and resolves significant operational problems or takes a lead** role in training others to identify and resolve operational problems.

Knowledge, Skills and Abilities

Ability to communicate effectively. Ability to lead** and train staff to identify and resolve or refer operational problems in data processing and computer operation systems and related technology. Ability to install complex system software. Ability to troubleshoot customer side applications in a variety of configurations and hardware platforms; install, administer and update WEB server software, accounts, and procedures.

Experience

Experience with diagnosing and troubleshooting methods and applications used in large complex information technology environments. Experience with communication systems, theory, methods, practices and procedures for a wide range of computer systems, platforms, applications, data communications, service tracking and other applications used in help desk services.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.

Level 4 – Operations

PCLS: 02064

**Grade 79
Non-Exempt**

Descriptors

Work is performed under general direction. Supervises*** a major operational unit or work group or is recognized as the expert resource for a major area.



Knowledge, Skills and Abilities

Knowledge of principles of personnel management. Ability to supervise***, train, and evaluate staff. Ability to solve a variety of complex problems related to computer operations systems including diagnosing and troubleshooting problems with applications, software and hardware.

Experience

Demonstrated knowledge of principles of supervision including training and evaluation and project coordination. Ability to direct the most complex and sophisticated network systems.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of supervision and training,

telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.

Level 5 – Networks

PCLS: 02065

**Grade 77
Non-Exempt**

Descriptors

Work is performed under general supervision from supervisor or team leader. Generally works within well-defined guidelines in implementing and maintaining computer networks. Scope of tasks is somewhat limited. Complicated or unusual problems are referred to supervisor. Functions include equipment logistics, system setup and configuration, system security, software installation, preventive maintenance, and workstation connections. Completed assignments are reviewed for conformance with timelines, standards and policies/procedures.

Knowledge, Skills and Abilities

Ability to install maintain, update, repair desktop computing hardware and software. Ability to manage equipment logistics, system setup and configuration, system security, and software installation. Ability to do preventive maintenance, attach workstations to networks, Internet, and departmental and campus LAN servers. Ability to implement computer networking technologies and methodologies and operate a variety of personal computers and related equipment.

Experience

Demonstrated experience in computer systems or network operations environment with responsibility for basic operations or technical applications.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.



Level 6 – Networks
PCLS: 02066

Grade 78
Non-Exempt

Descriptors

Work is performed under intermittent supervision. Generally works within well-defined guidelines in implementing and maintaining computer networks. Scope of tasks is broader than at Level 5. Complicated or unusual problems may be referred to supervisor. Functions include equipment logistics, system setup and configuration, system security, software installation, preventive maintenance, and workstation connections. New or usual assignments typically are reviewed for conformance with timelines, standards and policies or procedures.

Knowledge, Skills and Abilities

Ability to install, maintain, update, and repair desktop computing hardware and software. Ability to detect problems with equipment logistics, system setup and configuration, system security, and software installation. Ability to do preventive maintenance, attach workstations to networks, Internet, and departmental and campus LAN servers. Ability to implement computer networking technologies and methodologies and operate a variety of personal computers and related equipment.

Experience

Demonstrated experience in computer systems or network operations environment with responsibility for advanced operations or basic technical applications.

Education

Academic training in computer science or management information systems course work providing familiarity with a variety of personal computers, principles of telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.

Level 7 – Networks
PCLS: 02067

Grade 79
Non-Exempt

Descriptors

Work is performed under administrative supervision. Tasks generally have no defined processes for problem resolution. Requires considerable analysis of conflicting issues for resolution of technical problems associated with the computer network. Assists with designing and configuring large, complex, multiple WAN/LAN server systems for public and internal access, and with administering those systems at the system and user group levels. Provides full support of microcomputers and assists with development of standards for hardware, software and associated training. Responsible for systems administration, contract administration and limited programming. May provide guidance to others.



Knowledge, Skills and Abilities

Demonstrated general working knowledge of automated information, communication and networking systems principles and techniques. Demonstrated advanced knowledge of computer networking technologies and methodologies. Ability to identify and resolve complex network problems. Ability to install, cable, and configure voice, data, and video network components in accordance with IS engineering specifications, and with codes, regulations, standards and policies. Ability to perform new equipment bench testing, burn-in, and acceptance procedures.

Experience

Demonstrated experience in a computer systems or network operations environment with responsibility for advanced operations and technical applications.

Education

Academic training in computer science or management information systems course work providing a working knowledge of a variety of personal computers, principles of telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.

Level 8 – Networks

PCLS: 02068

**Grade 80
Exempt**

Descriptors

Work is performed under general direction. May be a specialist focusing on specific network areas related to projects or may lead** a work group or project, or supervise*** a team managing a network.

Knowledge, Skills and Abilities

Requires demonstrated advanced knowledge of the operation and maintenance of networks and network communications systems, including WAN/LAN, high speed networks, public telecommunications, Internet and other network technologies. Knowledge of microcomputers, configuration software, operating systems, and a wide variety of applications. Knowledge of methods of installing and maintaining network systems, PCs and workstations and operating systems by performing troubleshooting and by applying knowledge of cabling standards and installation standards. Ability to lead, train, and evaluate lower level staff and to problem solve a variety of network and computer operations systems problems or to implement and maintain personal computer systems, local and wide area networks, customer workstations, network components, and other automation equipment including diagnosing, troubleshooting and resolving problems with applications, software and hardware.

Experience

Demonstrated experience in a computer systems or network operations environment with responsibility for advanced operations and technical applications.



UNIVERSITY
of ALASKA

INFORMATION SYSTEMS TECHNICIAN

Job Classification

Adopted: July 14, 2002

Revised:

Education

Academic training in computer science or management information systems course work providing advanced knowledge of a variety of personal computers, principles of telecommunications, and functions of IS systems and diagnostic techniques enabling incumbents to function at the required level may substitute for experience.

- ** Lead: Provide day-today guidance, training and direction for staff in addition to other duties. Regularly assign and review work. Is fluent in assigned technical area.
- *** Supervise: Hire, train, evaluate performance and initiate corrective action