STATE OF OHIO (DAS) CLASSIFICATION SPECIFICATION

CLASSIFICATION SERIES:	SERIES NO.:
Network Administration	6713
MAJOR AGENCIES:	EFFECTIVE DATE :
All Agencies	03/07/2004

SERIES PURPOSE:

The purpose of the network administration occupation is to provide local area &/or wide area computer network support services to agency users.

At the lowest level, employees learn to & monitor & maintain network services.

At the middle levels, employees administer division or local office area network &/or wide area network or design, implement & maintain network services.

At the two highest levels, employees supervise employees engaged in design, implementation, operation & maintenance of computer networks.

GLOSSARY: The terms listed below, which will appear within the classification specification, are to be interpreted to mean the following:

CNA Network Certification: Designed for persons responsible for day-to-day operations of a network, with the typical tasks of adding/deleting users, backing up the server, loading applications & maintaining security. To earn certification, a candidate must demonstrate proficiency in a selected operating system (e.g., NetWare 2.2, 3.1X or 4.0).

CNE/CBE/MCP Network Certification: Designed for persons to provide quality support for NetWare networks including system design, installation & maintenance. To earn certification, a candidate must demonstrate mastery of networking concepts.

ECNE Network Certification: Designed for persons who have been CNE/CBE/MCP certified & focuses on the support of enterprise-wide networks. To earn certification, a candidate must demonstrate proficiency in specialized networking technology.

Note: Equivalent network certification would be as a result of a candidate attending a training program & demonstrating proficiency in the same/similar subject matter & skills.

Internetworking Services: The services involve the planning & implementation of connecting dissimilar LANs &/or other computer systems (e.g., graphic workstations, minicomputers or mainframe computers) client server & multi-media systems & peer to peer networks which may use communication languages to communicate among the respective networks.

Local Area Network (LAN): A group of computers & other devices that are connected by a communications link (network) which allows any device to interact with another on the network. A Local Area Network generally spans a small geographic area, such as within a single building. For example: A powerful personal computer is used as a network file server with network licensed software stored on it. The file server is connected by an ethernet cabling scheme to many personal computers & a single printer.

Wide Area Network: A network that transmits over a large geographic area using lines provided by a common carrier of private telecommunications facilities and/or provides a link between dispersed local area network segments &/or provides the links from a computer center to remote locations. The Ohio Data Network is an example of a wide area network.

CLASS TITLECLASS NUMBERPAY RANGEEFFECTIVENetwork Administrator 1671313203/07/2004

CLASS CONCEPT:

The entry level class works under immediate supervision & requires working knowledge of computer science or related field in order to monitor & maintain local area &/or wide area computer network (e.g., run network diagnostics, manage network file & print server functions, create & maintain user connectivity; create user accounts based on established protocols & user private directory based on adopted standards; troubleshoot network problems; track/monitor software metering; coordinate network & application software upgrades & monitor licenses; provide limited software support; assign user to established security groups).

CLASS TITLE
Network Administrator 2

CLASS NUMBER

PAY RANGE

03/07/2004

CLASS CONCEPT:

The full performance level class works under direction & requires considerable knowledge of computer science or related field & computer network hardware, software & operating systems & procedures in order to administer division or office local area &/or wide area network (e.g., create/maintain user environment; troubleshoot user station problems; support users in using network applications; install networked software applications; implement/ monitor software metering) & document & communicate problem resolutions with other network administrators & computer personnel involved in maintaining local area network, or in Department of Job & Family Services, administer area (i.e., division/office/sites as assigned) local area &/or wide area network.

CLASS TITLECLASS NUMBERPAY RANGEEFFECTIVENetwork Administrator 3671333403/07/2004

CLASS CONCEPT:

The advanced level class works under direction & requires considerable knowledge of computer science & computer network hardware, software & operating systems & procedures in order to design, implement & maintain computer network services for assigned agency or one or more divisions.

CLASS TITLECLASS NUMBERPAY RANGEEFFECTIVENetwork Administration Supervisor671351503/07/2004

CLASS CONCEPT:

The supervisory level class works under general direction & requires considerable knowledge of computer science or related field & thorough knowledge of computer network hardware, software & operating systems & procedures in order to design, implement & maintain computer network & internetworking services & as secondary duty, supervise assigned computer personnel.

CLASS TITLECLASS NUMBERPAY RANGEEFFECTIVENetwork Administration Manager671361603/07/2004

CLASS CONCEPT:

The managerial level class works under administrative direction & requires considerable knowledge of computer science or related field & thorough knowledge of computer network hardware, software & operating systems & procedures in order to supervise computer personnel engaged in design, implementation & maintenance of computer networks & internetworking services & has overall responsibility for such services.

CLASS TITLE	CLASS NUMBER	<u>B. U.</u>	EFFECTIVE	PAY RANGE
Network Administrator 1	67131	14	03/07/2004	32

Monitors & maintains local area &/or wide area computer network (e.g., runs network diagnostics; manages network file & print server functions; creates & maintains user connectivity; creates user accounts based on established protocols; creates user private directory based on adopted standards; troubleshoots user station problems; tracks/monitors software metering; coordinates network & application software upgrades & monitors licenses; provides limited software support by assisting network users print to commonly shared printer; maintains printer queues; assigns security rights to user in work groups).

Documents & communicates problem resolutions with upper level network administrators involved in maintaining network; diagnoses common network hardware problems (e.g., related to cabling; workstation equipment failure).

Responds to production down problems on 24 hour basis.

In agency with large, integrated enterprise-wide network (e.g., Ohio Department of Job & Family Services), coordinates all activity with supervisor or manager responsible for entire network.

Operates established data back-up & retrieval systems.

Receives training in how to administer local area &/or wide area network.

MAJOR WORKER CHARACTERISTICS:

Knowledge of computer science or related field; microcomputer network hardware, software & operating systems & procedures; network administration/network technology. Skill in operation of computer & peripheral equipment & keyboard operations. Ability to comprehend extensive variety of technical material, define problems, collect data, establish facts & resolve technical problems; cooperate with co-workers on group projects.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of undergraduate core coursework or 2 yrs. trg. in computer science or related field which either option including one course in use of microcomputer software & hardware & 1 course in network administration.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT: Not applicable.

UNUSUAL WORKING CONDITIONS:

CLASS TITLE	CLASS NUMBER	<u>B. U.</u>	EFFECTIVE	PAY RANGE
Network Administrator 2	67132	14	03/07/2004	33

Administers local area &/or wide area network for assigned division/office which involves creation/maintenance of user environment (e.g., establishes network directory structure; implements security; maintains printer queues & print servers; makes regular backups; implements security priorities; customizes user menus; administers client server & multi-media technologies along with peer to peer networks), troubleshoots networking problems, supports users in using networked applications, installs & tests networked software applications & hardware, optimizes & tunes operating system to resolve performance issues, implements/monitors software metering & upgrades network operating systems; OR in Department of Job & Family Services, administers area (i.e., division/office/sites as assigned) local area &/or wide area network (e.g., creates/maintains printer queues, definition & setup of users; maintains file & directory security; establishes network directory structures; backs up file servers; trouble shoots network malfunctions &/or proactively manages network software), supports hardware (e.g., hubs, switches, routes), sets up & installs operating system software & hardware.

Documents & communicates problem resolutions with other network administrators & computer personnel involved in maintaining network; writes network maintenance procedures.

Responds to production down problems on 24 hour basis; performs help desk functions.

In agency with large, integrated enterprise-wide network (e.g., Ohio Department of Job & Family Services), coordinates all activity with supervisor or manger responsible for entire network

Attends meeting & training to maintain network certification.

MAJOR WORKER CHARACTERISTICS:

Knowledge of computer science or related field; microcomputer network hardware, software & operating systems & procedures. network administration/network technology. Skill in operation of computer & peripheral equipment & keyboard operations. Ability to comprehend extensive variety of technical material, define problems, collect data, establish facts & resolve technical problems; cooperate with co-workers on group projects.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of undergraduate core coursework in computer science or related field which included discussion & use of computer software & hardware; 6 mos. trg. or 6 mos. exp. in monitoring & maintaining local &/or wide area network hardware, software & operating systems & procedures.

- -Or 6 mos. exp. as Network Administrator 1, 67131.
- -Or CNA or equivalent network certification.
- -Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT: Attends training to maintain network certification.

UNUSUAL WORKING CONDITIONS:

CLASS TITLE	CLASS NUMBER	<u>B. U.</u>	EFFECTIVE	PAY RANGE
Network Administrator 3	67133	14	03/07/2004	34

Designs, implements & maintains computer network services for assigned agency or one or more divisions (e.g., evaluates network hardware & software & designs network configuration; sets up hardware; installs network cards, cabling, hubs, concentrators & Token Ring multi-station access units; installs & tests software; configures network server; installs network user software component; maintains physical links; administers client server & multi-media technologies along with peer-to-peer networks; designs, implements & maintains security; designs, implements & maintains global naming conventions among multiple servers; designs & implements disaster recovery plans to maintain data integrity, transaction tracking, disk mirroring, disk duplexing, redundant servers & automated tape backup installs & maintains application software; implements & maintains wireless, remote LAN nodes & dial-up workstations; monitors traffic on network, hubs & routers to better utilize network & eliminate slowdowns; ensures WAN security; monitors WAN traffic & errors & takes appropriate corrective action) & coordinates hardware installation &/or activities with data archival specialist/team & other personnel involved in maintaining computer network.

Resolves complex or recurrent network problems; provides technical support tot lower-level network administrators.

Acts as security specialist or assists in developing security policies & procedures; reviews hardware & software options; evaluates hardware & software products & makes purchase recommendations; prepares reports for long range plan; assists in preparing budget for network operations; assists supervisor in design of new network, wiring plans, equipment purchases & related functions.

In agency with large, integrated enterprise-wide network (e.g., Ohio Department of Job & Family Services), coordinates all activity with supervisor or manager responsible for entire network.

Attends industry seminars & conferences; maintains state-of-art awareness of current vendor offerings & standards; attends training to retain network certification; confers with training officer in order to produce training materials or evaluate courses for distribution; facilitates network training courses.

Responds to production down problems on 24 hour basis.

MAJOR WORKER CHARACTERISTICS:

Knowledge of computer science or related field; microcomputer network hardware, software & operating systems & procedures; network administration; budgeting*; employee training & development*. Skill in operation of computer & peripheral equipment & keyboard operations. Ability to comprehend & discuss large number of technical variables & determine course of action; cooperate with co-workers on group projects.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of undergraduate core coursework in computer science or related field which included discussion & use of microcomputer software & hardware; 12 mos. trg. or 12 mos. exp. in computer network administration to include understanding of operating systems & networking technologies; 1 course or 3 mos. exp. in computer networking.

- -Or 12 mos. exp. as Network Administrator 2, 67132.
- -Or CNE or CBE or MCP or equivalent network certification.
- -Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT: Attends training to maintain network certification.

UNUSUAL WORKING CONDITIONS:

CLASS TITLE	CLASS NUMBER	B. U.	<u>EFFECTIVE</u>	PAY RANGE
Network Administration Supervisor	67135	EX	03/07/2004	15

Designs, implements & maintains computer network & internetworking services (e.g., sets up hardware; installs network cards, cabling, hubs, concentrators & Token Ring multi-station access units; installs software; configures network server; installs network user software component; maintains physical links; designs, implements & maintains security; designs, implements & maintains global naming conventions among multiple servers; designs disaster recovery implementations to maintain data integrity in distributed processing environment, disk mirroring, disk duplexing, redundant servers & automated tape backup & coordinates work with data archival specialist/team) & installs & monitors uninterruptible power supplies.

Coordinates installation of or installs host connectivity, multi-platform connectivity, remote dial up & multiprotocol implementations (e.g., TCP/IP, NFS, SNA, LAT, X.25, X.400); configures & installs/supports multi-segmented cabling schemes or more than one LAN access types (e.g., Ethernet, Token Ring, Arcnet, FDDI, wireless, dial up); designs & implements client server solutions & cooperative processing solutions.

Monitors packet traffic on one cable segment or across bridges & routers; allocates & monitors server disk storage space for users on network; allocates & monitors server memory usage to insure efficient dynamic memory usage; sets up & monitors network based network aware applications.

Performs protocol analysis; troubleshoots packet transmission problems; monitors line for deficiencies & ethernet & Token Ring segments for loading, collisions & congestion; runs Lanalyzer or Network General Sniffer; installs & maintains LAN Monitoring system (e.g., Cabletron Spectrum; HP Openview using Simple Network Management Protocol or Common Management Information Protocol agents at node); merges node information to global monitoring system (e.g., IBM Netview or DEC EMA).

Confers with training officer in order to produce training materials or evaluate courses for distribution; facilitates network training courses; cooperates with network administrators & host support team for inter-divisional &/or enterprise connectivity solutions; maintains state-of-art awareness of current vendor offerings & standards; attends industry seminars & conferences; reviews/evaluates networking software/hardware; prepares reports for long range plan; assists in preparing implementation budget for network operations; performs upgrades with other network personnel & host support team; acts as liaison to MIS or other departments for linking or sharing computer & communications equipment; participates on project teams; acts as project leader when necessary.

Supervises lower-level network administrator &/or other computer personnel (e.g., programmer/analysts, systems analysts, programmer specialists, telecommunications technicians) engaged in supporting/maintaining/operating/designing computer network.

MAJOR WORKER CHARACTERISTICS:

Knowledge of computer science or related field; computer network hardware, software & operating systems & procedures; network administration; employee training & development; supervisory principles/techniques*; budgeting*. Skill in operation of computer & peripheral equipment & keyboard operations. Ability to comprehend & discuss large number of technical variables & determine course of action; cooperate with co-workers on group projects, resolve complaints from network users & provide friendly atmosphere as supervisor.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of undergraduate core coursework in computer science or related field which included discussion & use of computer software & hardware; 12 mos. as Network Administrator 3, 67133, or performing like duties to include supervising others in networking.

- -Or ECNE or equivalent network certification.
- -Or two or more of following or like network certifications: CNE, CBE & MCP.
- -Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT: Attends training to maintain network certification(s).

UNUSUAL WORKING CONDITIONS:

CLASS TITLE	CLASS NUMBER	B. U.	EFFECTIVE	PAY RANGE
Network Administration Manager	67136	EX	03/07/2004	16

Is responsible for overall design, maintenance & implementation of computer networks & internetworking services & supervises technical computer network support personnel, reviews network functioning, procedures & documentation, monitors work in progress, orients & trains new staff &/or recommends training seminars/classes for staff, assists staff in resolving difficult networking problems & answers technical questions, establishes & enforces unit policies & procedures, conducts staff meetings, prepares budget & participates in long range planning.

Supports local area networks & wide area networks; responsible for design & setup of local area networks; sets up hardware; installs network cards, cabling, hubs, concentrators & token ring multi-station access units; installs software; configures network server, installs network client software component; maintains physical links; designs, implements & maintains security; designs, implements & maintains global naming conventions among multiple servers; designs disaster recovery implementations to maintain data integrity in distributed processing environment; disk mirroring, disk duplexing, redundant servers & tape backup; coordinates work with data archival specialist/team; installs & monitors uninterruptible power supplies.

Coordinates installation of or installs host connectivity, multi-platform connectivity, remote dial up; installs multiprotocol implementations (e.g., TCP/IP, NFS, SNA, LAT, X.25, X.400); configures & installs/supports multisegmented cabling schemes or more than one LAN access type (e.g., Ethernet, Token Ring, Arcnet, FDDI); designs & implements client server solutions & cooperative processing solutions.

Monitors packet traffic on one cable segment or across bridges & routers; allocates & monitors server disk storage space for users on network; allocates & monitors server memory usage to insure efficient dynamic memory usage; sets up & monitors network based 'network aware' applications.

Performs protocol analysis; troubleshoots packet transmission problems; monitors line for deficiencies; monitors ethernet & token ring segments for loading, collisions & congestion; runs Novell Lanalyzer or Network General Sniffer; installs & maintains LAN Monitoring system (e.g., Cabletron Spectrum; HP Openview using Simple Network Management Protocol or Common Management Information Protocol agents at node); merges node information to global monitoring system (e.g., IBM Netview or DEC EMA).

Confers with training officer to produce training materials or evaluate courses for distribution; facilitates network training courses; cooperates with network administrators & host support team for inter-divisional &/or enterprise connectivity solutions; maintains state-of-art awareness of current vendor offerings & standards; attends industry seminars & conferences; reviews/evaluates networking software/hardware; performs upgrades with other network personnel & host support team; acts as liaison to MIS or other departments for linking or sharing computer & communications equipment.

MAJOR WORKER CHARACTERISTICS:

Knowledge of computer science or related field; computer network hardware, software & operating systems & procedures; network administration; employee training & development; supervisory principles/techniques; budgeting*. Skill in operation of computer & peripheral equipment & keyboard operations. Ability to comprehend & discuss large number of technical variables & determine course of action; cooperate with co-workers on group projects, resolve complaints from network users & establish friendly atmosphere as supervisor.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

12 mos. exp. as Network Administration Supervisor, 67135.

- -Or 2 yrs. exp. as Network Administrator 3, 67133.
- -Or ECNE or equivalent network certification; 12 mos. trg. or 12 mos. exp. in supervisory principles & techniques.
- -Or two or more of following or like network certifications: CNE, CBE & MCP: 12 mos. trg. or 12 mos. exp. in supervisory principles & techniques.
- -Or equivalent of Minimum Class Qualifications For Employment noted above.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT: Attends training to maintain network certification(s).

UNUSUAL WORKING CONDITIONS: