NEW YORK STATE OF OPPORTUNITY. | Department of Labor

NETWORK ADMINISTRATOR
(Competency-Based)

APPENDIX A
D.O.T. CODE 039.162-010
O*NET CODE 15-1142.00

Competency/performance-based apprenticeship occupations are premised on attainment of demonstrated, observable and measurable competencies in lieu of meeting time-based work experience and on-the-job learning requirements. In competency/performance-based occupations apprentices may accelerate the rate of competency achievement or take additional time beyond the approximate time of completion.

This training outline is the current standard for Work Processes and Related Instruction. Changes in technology, regulations, and safety/health issues may result in the need for additional on-the-job or classroom learning.

Potential Job Titles: Systems Administrator, Computer Systems Analyst, Network Control Operator and Supervisor, Network Control Operator, Level 1 IT Engineer.

WORK PROCESSES

A. Workplace Basics

1. Describe workplace structure.
2. Describe workplace policies and procedures; general and Information Technology (IT) related.
3. Demonstrate efficient basic task/time management, status reporting, work order updates, team participation.
4. Demonstrate ability to communicate technical ideas/concepts when assisting users unfamiliar with IT jargon.

B. Computer Fundamentals

1. Identify, research, and resolve technical issues affecting the following, but not limited to; desktops, laptops, servers, printers, access points and mobile devices.

2. Demonstrate knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
3. Identify and demonstrate knowledge of computer software by: installing, configuring, and providing customer assistance in using common software, such as, but not limited to; Microsoft Office and/or Apple equivalents.
4. Provide all aspects of day-to-day support to users in Windows-based environments.
5. Demonstrate ability to maintain user accounts and access privileges.

C. Customer Service Fundamentals

1. Perform help desk functions assisting in the following, but not limited to; internal and external systems, databases, networking equipment, personal computer systems, and peripherals.
2. Employ knowledge of principles and processes for providing customer and personal services, including customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
3. Consult with users, management, vendors, and technicians to assess computing needs and system requirements.
4. Respond promptly to inbound help desk requests and provide remote remediation when required.
5. Identify, research and resolve technical issues affecting the following technologies: desktops, laptops, servers, firewalls, switches, printers, access points, tablets, mobile devices, telecommunications technologies, Internet connectivity & Intranet connectivity

D. Networking and Systems Fundamentals

1. Provide support for Windows Server 2008/2012/2016 networks (if applicable).
2. Perform user maintenance through Active Directory.
3. Configure a network operating system, including protocols, accessibility, and layering.
4. Troubleshoot issues related to routing & switching.
5. Support & maintain network equipment including but not limited to Cisco, Meraki, SonicWall, & HP.
6. Support & maintain backup technologies utilizing tape and disk-disk architectures such as Acronis, ArcServ, Barracuda & Symantec Backup Exec.
7. Support and maintain network equipment including but not limited to Cisco, Meraki, SonicWall, and HP.
8. Remediate malware infections using Anti-Virus and Anti-Malware applications

E. Additional Computing Topics

    1. Demonstrate a solid understanding of technology such as, but not limited to; databases and their application; multi-media software; video conferencing applications.
    2. Provide internal training to staff on how to support and manage various technologies currently utilized and new ones as they are implemented.

	Total Hours	1,000-2,000

Apprentices in Competency-Based Programs shall participate in no fewer than 1,000 documented hours of on-the-job training, and until they have demonstrated a competency for each skill in the Work Processes.

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to http://www.labor.state.ny.us/workerprotection/publicwork/PDFs/Article8FAQS.pdf.

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RELATED INSTRUCTION

Safety/Health/Environment
General Workplace Safety
First Aid & CPR (minimum 6.5 hours every 3 years)
Right-to-Know/ Safety Data Sheets (SDS)
Sexual Harassment Prevention – must comply with Section 201-g of the Labor Law

Computer and Network Components and Operations
Hardware
Peripherals
Software
Installation and configuration of software
Operating Systems, e.g., Microsoft, MacOS
Troubleshooting
Networks: Local Area Network (LAN); Wide Area Network (WAN)
Domain Name Servers
Domain Controllers
Transmission Control Protocol (TCP) / Internet Protocol (IP)
Installation and configuration of various network devices
Network Functions
Routers
Routing Protocol
Cybersecurity
Databases (if Work Process E is selected in Appendix A)
Multi-Media applications (if Work Process E is selected in Appendix A)
Video applications (if Work Process E is selected in Appendix A)

Professional Development
Technical Support Communication
Time Management
Basic Project Management
Team and Supervisor Communication Skills
Customer Service Fundamentals
Industry recognized credentials/certifications pertaining to the field
Other Courses as Necessary

At least 144 hours of Related Instruction per year must be available for the apprentice at the time of his/her indenture. However, the apprentice may test out earlier if able to demonstrate competence for each topic on the Related Instruction outline.