



TORO Analysis of Network and Computer Systems Administrators to Desktop Publishers

INPUT SECTION:

Transfer	Title	O* NET	Filters		
From Title:	Network and Computer Systems Administrators	15-1071.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Desktop Publishers	43-9031.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

OUTPUT SECTION:

Grand TORQ:		90
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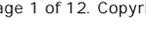
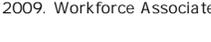
Ability TORQ		Skills TORQ		Knowledge TORQ	
Level	 94	Level	 84	Level	 91

Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Speech Clarity	44	3	62	No Skills Upgrade Required!				No Knowledge Upgrades Required!			

LEVEL and IMPT (IMPORTANCE) refer to the Target Desktop Publishers. GAP refers to level difference between Network and Computer Systems Administrators and Desktop Publishers.

ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	Network and Computer Systems Administrators	Desktop Publishers	Importance
Written Comprehension	67 	 51	 81
Near Vision	66 	 62	 78
Visualization	62 	 57	 72
Oral Comprehension	66 	 55	 68
Written Expression	51 	 50	 68
Fluency of Ideas	60 	 55	 65
Problem Sensitivity	69 	 44	 65
Oral Expression	 73	 53	 62
Originality	59 	 51	 62
Speech Clarity	41 	 44	 62



Category Flexibility	57	51	59
Selective Attention	53	42	59
Information Ordering	62	50	56
Flexibility of Closure	60	50	56
Visual Color Discrimination	53	48	56
Speech Recognition	53	48	56
Deductive Reasoning	71	46	53
Inductive Reasoning	73	48	53
Finger Dexterity	64	42	50
Skill Level Comparison - Abilities with importance scores over 69			
Description	Network and Computer Systems Administrators	Desktop Publishers	Importance
Active Listening	66	65	78
Reading Comprehension	73	66	72
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Network and Computer Systems Administrators	Desktop Publishers	Importance
Computers and Electronics	88	65	69

Experience & Education Comparison					
Related Work Experience Comparison			Required Education Level Comparison		
Description	Network and Computer Systems Administrators	Desktop Publishers	Description	Network and Computer Systems Administrators	Desktop Publishers
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	3%	0%	Professional Degree	0%	0%
6-8 years	3%	0%	Post-Masters Cert	0%	0%
4-6 years	23%	32%	Master's Degree	4%	0%
2-4 years	47%	11%	Post-Bachelor Cert	9%	0%
1-2 years	15%	33%	Bachelors	42%	4%
6-12 months	1%	15%	AA or Equiv	14%	0%
3-6 months	3%	1%	Some College	9%	26%
1-3 months	0%	3%	Post-Secondary Certificate	18%	16%
0-1 month	1%	0%	High School Diploma or GED	1%	51%
None	0%	1%	No HSD or GED	0%	0%
Network and Computer Systems Administrators			Desktop Publishers		
Most Common Educational/Training Requirement:					
Bachelor's degree			Postsecondary vocational award		
Job Zone Comparison					
4 - Job Zone Four: Considerable Preparation Needed			3 - Job Zone Three: Medium Preparation Needed		



A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

Most of these occupations require a four - year bachelor's degree, but some do not.

Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks

Network and Computer Systems Administrators

Core Tasks

Generalized Work Activities:

- Interacting With Computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Thinking Creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

Specific Tasks

Occupation Specific Tasks:

- Confer with users to discuss issues such as computer data access needs, security violations, and programming changes.
- Coordinate implementation of computer system plan with establishment personnel and outside vendors.
- Develop plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs.
- Document computer security and emergency measures policies, procedures, and tests.
- Encrypt data transmissions and erect firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers.
- Maintain permanent fleet cryptologic and carry-on direct support systems required in special land, sea surface and

Desktop Publishers

Core Tasks

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- Interacting With Computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Thinking Creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.

Specific Tasks

Occupation Specific Tasks:

- Check preliminary and final proofs for errors and make necessary corrections.
- Collaborate with graphic artists, editors and writers to produce master copies according to design specifications.
- Convert various types of files for printing or for the Internet, using computer software.
- Create special effects such as vignettes, mosaics, and image combining, and add elements such as sound and animation to electronic publications.
- Edit graphics and photos using pixel or bitmap editing, airbrushing, masking, or image retouching.
- Enter data, such as coordinates of images and color specifications, into system to retouch and make color corrections.
- Enter digitized data into electronic prepress system computer memory, using scanner, camera, keyboard, or mouse.



subsurface operations.

- Modify computer security files to incorporate new software, correct errors, or change individual access status.
- Monitor current reports of computer viruses to determine when to update virus protection systems.
- Monitor use of data files and regulate access to safeguard information in computer files.
- Perform risk assessments and execute tests of data processing system to ensure functioning of data processing activities and security measures.
- Review violations of computer security procedures and discuss procedures with violators to ensure violations are not repeated.
- Train users and promote security awareness to ensure system security and to improve server and network efficiency.

Detailed Tasks

Detailed Work Activities:

- adjust computer operation system
- communicate technical information
- conduct computer diagnostics to determine nature of problems
- confer with personnel to discuss security violations or programming
- develop policies, procedures, methods, or standards
- evaluate computer system user requests or requirements
- follow confidentiality procedures
- follow data security procedures
- identify appropriate software for project
- install electronic equipment, components, or systems
- install security measures
- maintain or repair computers or related equipment
- monitor use of computer data files to safeguard information
- obtain information from individuals
- perform minor repairs to hardware, software, or peripheral equipment
- plan computer security measures
- prepare instruction manuals
- provide technical support to computer users
- revise or correct errors in computer programs, software, or systems
- test computer programs or systems
- train workers in use of computer and related equipment
- understand computer equipment operating manuals

• understand technical information for

scanner, camera, keyboard, or mouse.

- Enter text into computer keyboard and select the size and style of type, column width and appropriate spacing for printed materials.
- Import text and art elements such as electronic clip-art or electronic files from photographs that have been scanned or produced with a digital camera, using computer software.
- Load floppy disks or tapes containing information into system.
- Operate desktop publishing software and equipment to design, lay out, and produce camera-ready copy.
- Position text and art elements from a variety of databases in a visually appealing way to design print or web pages, using knowledge of type styles and size and layout patterns.
- Prepare sample layouts for approval, using computer software.
- Select number of colors and determine color separations.
- Store copies of publications on paper, magnetic tape, film or diskette.
- Study layout or other design instructions to determine work to be done and sequence of operations.
- Transmit, deliver or mail publication master to printer for production into film and plates.
- View monitors for visual representation of work in progress and for instructions and feedback throughout process, making modifications as necessary.

Detailed Tasks

Detailed Work Activities:

- achieve special camera effects
- create art from ideas
- design advertising layouts
- develop new office forms
- develop tables depicting data
- distinguish details in graphic arts material
- identify color or balance
- inspect manufactured products or materials
- load tapes, disks or paper into computers or peripherals
- operate cameras
- operate scanner
- paste up materials to be printed
- prepare artwork for camera or press
- proofread printed or written material
- read technical drawings
- read work order, instructions, formulas, or processing charts
- select materials or tools



- understand technical information for electronic repair work
- use computers to enter, access or retrieve data
- use interpersonal communication techniques
- use knowledge of investigation techniques
- use precision tools in electronics repair
- use spreadsheet software
- use word processing or desktop publishing software

- set page layout or composition
- use computer graphics design software
- use computers to enter, access or retrieve data
- use desktop publishing software
- use graphic arts techniques
- use knowledge of paper characteristics in publishing or printing processes
- use word processing or desktop publishing software

Technology - Examples

Access software

- Access management software
- Mac HelpMate
- Remote desktop control software

Administration software

- Cisco Systems CiscoWorks
- Element management software
- Hewlett-Packard HP Network Node Manager
- Network address management software
- Network documentation software
- Network management software
- Network shutdown software
- Simple network management protocol SNMP software
- SolarWinds software

Analytical or scientific software

- Root cause analysis software

Authentication server software

- Password management software

Backup or archival software

- Backup and archival software
- Symantec Ghost Solution Suite
- System and data disaster recovery software
- VERITAS Backup Exec

Compiler and decompiler software

- Command interpreters

Computer based training software

- Computer based training software

Configuration management software

Technology - Examples

Charting software

- Microsoft Office Visio

Data conversion software

- AlgoLab Raster to Vector Conversion Toolkit
- Data conversion software
- GTX RastorCAD
- Portable document file creation software
- Potrace software
- Trix TracTrix

Desktop publishing software

- Adobe Systems Adobe FrameMaker
- Adobe Systems Adobe InDesign
- Adobe Systems Adobe PageMaker
- AT&T Troff
- Corel Ventura
- Desktop publishing software
- GrassHopper PageStream
- LaTeX software
- Microsoft Publisher
- PagePlus SE software
- Passepartout software
- Pattern Stream software
- QuarkXpress
- Scribus software

Development environment software

- Adobe Systems Adobe PostScript
- Extensible markup language XML



- Application management software

- Automated installation software

- Configuration management software

- Microsoft Windows Sysprep

- Patch and update management software

- Systems and applications migration software

Data base management system software

- Oracle software

Data base reporting software

- ReCrystallize Crystal Reports

Data base user interface and query software

- Structured query language SQL

Desk top communications software

- Secure shell SSH software

Development environment software

- C

Enterprise application integration software

- Enterprise application integration EAI software

- Systems integration software

Gateway software

- Microsoft Windows Terminal Services Access Manager

Graphical user interface development software

- Tk software

Helpdesk or call center software

- Help desk software

Internet directory services software

- Active directory software

- Berkeley Internet Domain Name BIND software

- Domain name system DNS software

- Network addressable storage NAS software

Network monitoring software

- Dartware InterMapper

- Ethernal

- IBM Director

- IBM NetView

- Lavalys Everest

- Microsoft Visual Basic

- Scalable vector graphics SVG

Document management software

- Adobe Systems Adobe Acrobat software

- Color management software

Graphics card driver software

- Graphics card driver software

Graphics or photo imaging software

- Adobe Systems Adobe Freehand

- Adobe Systems Adobe Illustrator

- Adobe Systems Adobe LiveMotion

- Adobe Systems Adobe Photoshop software

- Apple iPhoto

- Canon software

- CodedColor software

- Corel CorelDraw Graphics Suite

- Corel Paint Shop Pro

- Corel Photo-Paint

- GNU image manipulation program GIMP software

- Graphics software

- Inkscape software

- iView MultiMedia software

- Microsoft Picture It!

- Raster Graphics software

- Ulead PhotoImpact

- Vector Software

- Xara X

Information retrieval or search software

- Online image and graphics database software

Internet browser software

- Internet browser software

Object or component oriented development software

- Sun Microsystems Java

Office suite software



- Micromuse NetCool

- Multi-router traffic grapher MRTG software

- Nagios software

- Network and application load and performance testing software

- Network and component performance analysis software

- Network availability monitoring software

- Network modeling, mapping, and analysis software

- Network traffic flow monitoring and analysis software

- Network traffic probe software

- Novell Netware Management Station

- Online traffic calculator software

- Packet tracing software

- Quest BigBrother

- Quest Foglight

- Remote monitoring software

- Sun Microsystems NetManage

- Tcpdump software

- Veritas NerveCenter

- ZABBIX software

Network operating system enhancement software

- Management information base MIB software

- Network, server and operating system optimization software

- Operating system process control software

Network security and virtual private network VPN equipment software

- Firewall software

Network security or virtual private network VPN management software

- Citrix MetaFrame

- Intrusion prevention system IPS software

- Network and system vulnerability assessment software

- OpenOffice.org

Operating system software

- Apple AppleScript

Optical character reader OCR or scanning software

- Corel CorelScan

- Corel OCR-Trace 8

- Nuance OmniPage Professional

- PANTONE ColorVision ProfilerPlus

Presentation software

- Microsoft PowerPoint

Printer driver software

- Printer driver software

Spell checkers

- Spelling and grammar checking software

Spreadsheet software

- Microsoft Excel

Video creation and editing software

- Corel WebDraw

Web page creation and editing software

- Actuate DocBook

- Adobe Systems Adobe Dreamweaver

- Adobe Systems Adobe Flash Player

Web platform development software

- Cascading Style Sheets CSS

- Hypertext markup language HTML

- JavaScript

Word processing software

- Corel WordPerfect software

- Microsoft Word

Tools - Examples

- Desktop computers

- Pen tablets

- Laser printers

- Notebook computers

- Scanners



- Network intrusion detection software

- OpenService Open NerveCenter

- Security incident handling software

- Virtual local area network management software

Object or component oriented development software

- Practical extraction and reporting language Perl

- Python

Operating system software

- Kornshell

- Shell script

Optical network management software

- Optical network management software

Pattern design software

- Diagramming software

Platform interconnectivity software

- Virtual network computing VNC software

Program testing software

- Computer system diagnostics software

- Mercury Interactive LoadRunner

Requirements analysis and system architecture software

- Requirements management software

Storage networking software

- Storage area network SAN software

Transaction security and virus protection software

- Encryption software

- Honeypot

- Packet filter software

- Ping software

- Root kit detection software

Tools - Examples

- Cable verifiers

- Computer tool kits

- Desktop computers



- Redundant array of independent disks RAID systems
- Optical spectrum analyzers
- Mainframe computers
- Asynchronous transfer mode ATM analyzers
- Network switches
- Notebook computers
- Power meters
- Protocol analyzers
- Punchdown tools
- Optical time domain reflectometers
- Screwdrivers
- Load balancers
- Tape libraries
- Wire crimpers

Labor Market Comparison

Description	Network and Computer Systems Administrators	Desktop Publishers	Difference
Median Wage	\$ 57,690	\$ 32,200	\$(25,490)
10th Percentile Wage	\$ 40,040	\$ 25,640	\$(14,400)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 68,360	\$ 37,710	\$(30,650)
90th Percentile Wage	\$ 78,720	\$ 44,040	\$(34,680)
Mean Wage	\$ 58,030	\$ 33,360	\$(24,670)
Total Employment - 2007	1,070	130	-940
Employment Base - 2006	1,077	137	-940
Projected Employment - 2016	1,267	156	-1,111
Projected Job Growth - 2006-2016	17.6 %	13.9 %	-3.8 %
Projected Annual Openings - 2006-2016	44	5	-39

National Job Posting Trends

Trend for Network and Computer Systems Administrators

Trend for
Desktop
Publishers



Data from [Indeed](http://Indeed.com)

Recommended Programs

Prepress/Desktop Publishing and Digital Imaging Design

Prepress/Desktop Publishing and Digital Imaging Design. A program that prepares individuals to apply technical knowledge and skills to the layout, design and typographic arrangement of printed and/or electronic graphic and textual products. Includes instruction in printing and lithographic equipment and operations; computer hardware and software; digital imaging; print preparation; page layout and design; desktop publishing; and applicable principles of graphic design and web page design.

No schools available for the program

Maine Statewide Promotion Opportunities for Network and Computer Systems Administrators

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
15-1071.00	Network and Computer Systems Administrators	100	4	1,070	\$57,690.00	\$0.00	18%	44
15-1051.00	Computer Systems Analysts	93	4	1,650	\$69,340.00	\$11,650.00	20%	78
15-1081.00	Network Systems and Data Communications Analysts	91	3	610	\$59,790.00	\$2,100.00	47%	54
15-1021.00	Computer Programmers	89	4	720	\$58,240.00	\$550.00	-12%	16



15-1061.00	Database Administrators	89	4	300	\$60,260.00	\$2,570.00	20%	11
15-1032.00	Computer Software Engineers, Systems Software	86	4	290	\$73,410.00	\$15,720.00	11%	8
15-1031.00	Computer Software Engineers, Applications	84	4	1,060	\$63,750.00	\$6,060.00	30%	47
15-1071.01	Computer Security Specialists	83	4	1,070	\$57,690.00	\$0.00	18%	44
17-2072.00	Electronics Engineers, Except Computer	82	4	210	\$76,420.00	\$18,730.00	-26%	4
17-2071.00	Electrical Engineers	80	4	260	\$73,050.00	\$15,360.00	-10%	6
11-3021.00	Computer and Information Systems Managers	79	5	870	\$83,130.00	\$25,440.00	8%	21
27-1011.00	Art Directors	78	4	90	\$66,570.00	\$8,880.00	10%	7
17-2031.00	Biomedical Engineers	78	4	20	\$86,560.00	\$28,870.00	-10%	1
13-1081.00	Logisticians	77	4	190	\$59,120.00	\$1,430.00	4%	4
17-2112.00	Industrial Engineers	77	4	580	\$68,350.00	\$10,660.00	11%	22

Top Industries for Desktop Publishers

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Printing and related support activities	323100	24.00%	7,638	6,052	-20.77%
Newspaper publishers	511110	11.44%	3,642	3,120	-14.33%
Management of companies and enterprises	551100	4.37%	1,390	1,603	15.28%
Advertising and related services	541800	2.52%	802	905	12.83%
Self-employed workers, secondary job	000602	2.17%	692	689	-0.45%
Specialized design services	541400	2.09%	666	891	33.81%
Colleges, universities, and professional schools, public and private	611300	1.68%	535	598	11.87%
Religious organizations	813100	1.41%	449	538	20.01%
Computer systems design and related services	541500	1.32%	419	566	35.02%
Office supplies, stationery, and gift stores	453200	1.10%	349	288	-17.50%
Local government, excluding education and hospitals	939300	0.96%	306	344	12.34%
Employment services	561300	0.80%	254	322	26.56%



Management, scientific, and technical consulting services	541600	0.77%	244	435	78.53%
Software publishers	511200	0.68%	217	279	28.76%
Internet publishing and broadcasting	516100	0.61%	194	272	40.33%

Top Industries for Network and Computer Systems Administrators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Computer systems design and related services	541500	14.73%	45,535	67,628	48.52%
Management of companies and enterprises	551100	6.04%	18,676	23,682	26.81%
Colleges, universities, and professional schools, public and private	611300	4.65%	14,385	17,702	23.06%
Elementary and secondary schools, public and private	611100	3.97%	12,261	14,213	15.92%
Local government, excluding education and hospitals	939300	3.28%	10,144	12,535	23.57%
Wired telecommunications carriers	517100	3.15%	9,751	8,420	-13.64%
Depository credit intermediation	522100	2.72%	8,418	9,441	12.15%
Data processing, hosting, and related services	518200	2.61%	8,062	11,988	48.71%
Federal government, excluding postal service	919999	2.59%	8,022	8,342	3.99%
Management, scientific, and technical consulting services	541600	2.45%	7,589	14,903	96.38%
General medical and surgical hospitals, public and private	622100	1.96%	6,065	7,386	21.78%
Professional and commercial equipment and supplies merchant wholesalers	423400	1.86%	5,749	7,372	28.23%
State government, excluding education and hospitals	929200	1.78%	5,499	5,936	7.94%
Internet service providers and Web search portals	518100	1.66%	5,146	4,013	-22.02%
Software publishers	511200	1.63%	5,030	7,125	41.63%