

DACUM Research Chart for School Network Technician

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Purpose:

Install, configure and maintain local area and wide area network connectivity including network devices (e.g. switches, routers, servers) and related software.

Produced for

G R O S S M O N T
C O L L E G E



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Duties		Tasks									
A	Maintain Network Infrastructure	A-1 Evaluate Infrastructure Requirements	A-2 Conduct Site Survey	A-3 Develop Scope of Work	A-4 Verify Cable Path	A-5 Procure Materials	A-6 Install Cable Raceways	A-7 Install IDF Enclosures / Racks	A-8 Install Wire Management Hardware	A-9 Install Termination Panels	A-10 Install Network Cabling
		A-11 Terminate Network Cabling	A-12 Label Network Cabling / Connections	A-13 Perform Network Cable Testing	A-14 Update Network Documentation	A-15 Troubleshoot Cable Plant Problems					
B	Maintain Network Devices	B-1 Evaluate Network Requirements	B-2 Configure Routers / Gateways	B-3 Configure Switches	B-4 Configure Wireless Access Points / Bridges	B-5 Configure Network Appliances	B-6 Configure VLANs	B-7 Perform Device Upgrades / Updates	B-8 Troubleshoot Network Devices	B-9 Replace Failed Equipment	B-10 Relocate Network Devices
		B-11 Configure Network Printers / Copiers	B-12 Maintain Modem Banks	B-13 Maintain UPS Devices							
C	Maintain Network Servers	C-1 Evaluate Server Requirements	C-2 Determine Server Specifications	C-3 Install Server Hardware	C-4 Install Server Operating System	C-5 Install Server Applications	C-6 Configure Network Services (e.g. DNS, DHCP)	C-7 Perform Server Upgrades / Updates	C-8 Maintain User Accounts	C-9 Review Server Logs	
D	Maintain Network Security	D-1 Evaluate Network Vulnerabilities	D-2 Configure Firewalls	D-3 Configure Access Lists / Filters	D-4 Configure Encryption	D-5 Configure VPNs	D-6 Configure Permissions / Passwords	D-7 Configure Intrusion Detection Devices	D-8 Review System Logs	D-9 Install Security Updates	D-10 Restrict Unnecessary Protocols
		D-11 Secure Network Equipment (Location)	D-12 Implement Antivirus Strategy	D-13 Verify Virus Definition Updates	D-14 Implement Virus Response Procedure	D-15 Review Antivirus Logs / Reports					
E	Maintain Data Backup	E-1 Develop Backup / Restore Strategy	E-2 Perform Scheduled Backups	E-3 Review Backup Logs	E-4 Verify Backup Integrity	E-5 Secure Backup Media Offsite	E-6 Restore Data from Backup Media	E-7 Archive Network Device Configurations			
F	Monitor Network Activity	F-1 Install Network Monitoring Tools	F-2 Configure Management Protocols	F-3 Monitor Bandwidth Usage	F-4 Monitor Data Circuits	F-5 Analyze Network Reports	F-6 Perform Network Troubleshooting	F-7 Report Network Concerns			
G	Maintain Network Documentation	G-1 Maintain Network Equipment Inventory	G-2 Maintain Network Diagrams	G-3 Maintain Address Lists (e.g. IP, MAC)	G-4 Maintain Password Lists	G-5 Maintain Logs (e.g. Service, repair, updates)	G-6 Track Service Agreements / Warranties	G-7 Inventory Network Software Licenses			

H**Continue Professional Development**

H-1 Participate in Training	H-2 Research Online Resources	H-3 Review Professional Publications	H-4 Network with Other Professionals	H-5 Participate in Conferences	H-6 Participate in Professional Organizations	H-7 Pursue Technical Certifications			
I-1 Document Vendor Interactions	I-2 Participate in Meetings	I-3 Support Computer Technicians	I-4 Perform Preventative Maintenance	I-5 Influence Network Usage Policies	I-6 Recommend Technology Purchases	I-7 Perform Site Visits	I-8 Verify Contractor Performance	I-9 Support Technology Planning	

I**Perform Administrative Tasks**

General Knowledge and Skills

Knowledge of Industry Standards
(IEEE, EIA/TIA, etc.)
Computer Skills
Written/Oral Communication Skills
Knowledge of Safety Requirements (Electrical,
Hazardous Material, etc.)
Analytical Skills
Organizational Skills
Driving Skills
Problem-Solving Skills
Knowledge of Various Network Operating Systems
Knowledge of Various Desktop Operating Systems
Interpersonal Skills
Data Networking Skills
Ability to communicate at various technical levels

Worker Behaviors

Multitasking
Stamina
Team Player
Problem solver
Detail oriented
Positive attitude
Self-motivated
Responsible
Ethical
Resourceful
Professional appearance / demeanor
Patient
Flexible
Respectful
Tenacity
Methodical
Service oriented
Efficient

Tools, Equipment, Supplies and Materials

Multimeter
Radios (communication device)
Crimping tools
Cable testers
Network analyzers
Network / Patch Cables
Network monitoring software
Laptop (computer)
Basic hand tools
Probe/Toner
Termination tester
CD-Burner
Utility Resource CD
Raceway (Cable trays)
Tie downs
Termination jacks
Punch down tool
Face plates
Equipment vehicle
Power tools
Wire management devices
Label Maker
Fish tape / Telescopic Pole
Air dusters / vacuum
Cable caddy
Reference materials
Ladders
Worklights

Future Trends and Concerns

Increasing Internet / Network monitoring and reporting
Overlapping of duties
Increasing training requirements
Increasing specialization
Increasing network demand and bandwidth usage
As teachers develop increased technology skills, they
demand more technical support
Data/Voice/Video integration (Convergence)
Dependence on network availability (Mission critical)
Universal accessibility (Anytime / anywhere)