

CoLAB TalentReady IT Pathways
Networking KSAs for Curriculum Alignment

2. Protocols

	KSA Description	Knowledge, Skill, or Ability?	Bloom's Taxonomy Level?	Cross-cutting KSAs	Notes
a	Explain the DNS protocol.	Knowledge	2		
b	Define DNS Cache.	Knowledge	2		
c	Define Root DNS Servers.	Knowledge	2		
d	Discuss packet analyzing software (e.g. Wireshark).	Knowledge	2		
e	Use tracer tool to explore protocols.	Skill	1		
f	Interpret what a router is and how it functions (at the HS level).	Knowledge	3		
g	Apply secure network Protocols (e.g., IPsec, SNMP, SSH, DNS, TLS, SSL, TCP/IP, FTPS, HTTPS, SCP, ICMP).	ability	2	Cyber Security Specialist 6a, Cyber Security Technologist 6c	
h	Identify and apply Transmission Control Protocol and Internet Protocol (TCP/IP), Internet Protocol Version 4 (IPv4), Internet Protocol Version 6 (IPv6) applications and services (e.g., rlogin, Simple Mail Transfer Protocol [SMTP], Telecommunications Network [Telnet], File Transfer Protocol [FTP], Domain Name System [DNS], Network File System [NFS], Voice over Internet Protocol [VoIP], Internet Control Message Protocol [ICMP]).	knowledge	2	Software Development 1n	
i	Explain the relationship between ports, sockets, IP addresses and network services.	Knowledge	3		
j	Compare dynamic and static routing configuration.	Knowledge	2		
k	Explain the purpose of basic networking utilities (e.g. Netstat, Tracert, Traceroute, Ping IPConfig, IFConfig).	Knowledge	2		