

OSI	Tasks	Header Integration	Addressing	Responsible For	PDU (Protocol Data Unit)	TCP / IP	Header Integration Details	Protocols											
Application	<table><tr><td>Name System</td><td>DNS</td></tr><tr><td>Host Config</td><td>BOOTP, DHCP</td></tr><tr><td>Email</td><td>SMTP, POP, IMAP</td></tr><tr><td>File Transfer</td><td>FTP, TFTP</td></tr><tr><td>Web</td><td>HTTP, HTTPS</td></tr></table>	Name System	DNS	Host Config	BOOTP, DHCP	Email	SMTP, POP, IMAP	File Transfer	FTP, TFTP	Web	HTTP, HTTPS		Specific Address	Providing service to the users	Data	Application	<div>Header</div> <div>Transmission data</div>	DNS, BOOTP, DHCP, SMTP, POP, IMAP, FTP, TFTP, HTTP, HTTPS, MIME, SNMP, SOAP	
Name System	DNS																		
Host Config	BOOTP, DHCP																		
Email	SMTP, POP, IMAP																		
File Transfer	FTP, TFTP																		
Web	HTTP, HTTPS																		
Presentation	<table><tr><td>Translation</td></tr><tr><td>Compression</td></tr><tr><td>Encryption</td></tr></table>	Translation	Compression	Encryption															
Translation																			
Compression																			
Encryption																			
Session	<table><tr><td>Session Management</td></tr><tr><td>Authentication</td></tr><tr><td>Authorization</td></tr><tr><td>Synchronization</td></tr></table>	Session Management	Authentication	Authorization	Synchronization														
Session Management																			
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Authorization																			
Synchronization																			
Transport	<table><tr><td>Connection Control</td></tr><tr><td>Flow and Error Control</td></tr><tr><td>Segmentation and Reassembly</td></tr><tr><td>Multiplexing</td></tr></table>	Connection Control	Flow and Error Control	Segmentation and Reassembly	Multiplexing		Port Address (16 bit)	Identification of the application/ process (via Port number)	Segment	Transport	<table><tr><td colspan="3">TCP header</td><td rowspan="2">Transmission data</td></tr><tr><td>Source Port number</td><td>Destination Port number</td><td>Sequence number</td></tr></table>	TCP header			Transmission data	Source Port number	Destination Port number	Sequence number	TCP, UDP, SCTP
Connection Control																			
Flow and Error Control																			
Segmentation and Reassembly																			
Multiplexing																			
TCP header			Transmission data																
Source Port number	Destination Port number	Sequence number																	
Network	<table><tr><td>Providing Communication Channel</td></tr><tr><td>Routing</td></tr></table>	Providing Communication Channel	Routing		Logical address (IP, 32 bit)	Delivery of packets from source host to destination host	Packet	Internet	<table><tr><td colspan="3">IP header</td><td rowspan="2">TCP header</td><td rowspan="2">Transmission data</td></tr><tr><td>Protocol number</td><td>Source IP address</td><td>Destination IP address</td></tr></table>	IP header			TCP header	Transmission data	Protocol number	Source IP address	Destination IP address	IP, RIP, ICMP	
Providing Communication Channel																			
Routing																			
IP header			TCP header	Transmission data															
Protocol number	Source IP address	Destination IP address																	
Data Link	Media Access Control		Physical Address (MAC, 48 bit)	Moving frames from one hop to next	Frame	Network Access	<table><tr><td colspan="2">Ethernet header</td><td rowspan="2">IP header</td><td rowspan="2">TCP header</td><td rowspan="2">Transmission data</td></tr><tr><td>Source MAC address</td><td>Destination MAC address</td></tr></table>	Ethernet header		IP header	TCP header	Transmission data	Source MAC address	Destination MAC address	PPP, PPPoE				
Ethernet header		IP header	TCP header	Transmission data															
Source MAC address	Destination MAC address																		
Physical	Providing Transmission in Communication Line				Bits														