Cheatography

Network Layer in OSI Model Cheat Sheet by Arghya Basu (Drongo) via cheatography.com/197697/cs/41723/

Layers of the OSI Model	
Physical Layer (Layer 1)	
Data Link Layer (Layer 2)	
Network Layer (Layer 3)	
Transport Layer (Layer 4)	
Session Layer (Layer 5)	
Presentation Layer (Layer 6)	
Application Layer (Layer 7)	

Network Layer Functionality

Internetw- orking	Establishes logical connections between nodes in the same or different networks
Fragme- ntation	Breaks down packets into the smallest individual data units that transit across various networks
Packetizing	Encapsulates the packets received from upper layer protocol and makes new packets
Routing	Moves data from one device to another device
Traffic management	Manages traffic problems such as switching, routing, and controls the congestion of data packets

Anatomy of a Data Packet

✓ 32 bits					
Version	IHL	Type-of-Service	Total Length		
Identification		Flags	Fragmentation offset		
Time-to	-live	Protocol	Header Checksum		
Source Address					
Destination Address					
Options (+ padding)					
Data (variable)					

In Network Layer, the Protocol Data Unit (PDU) is a Packet.

Network Layer Protocols		
IP	Internet Protocol	
ICMP	Internet Control Message Protocol	
ARP	Address Resolution Protocol	
DDP	Datagram Delivery Protocol	
IGMP	Internet Group Management Protocol	

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