禪

[illegible]

[illegible]

[illegible]

[illegible] [illegible]

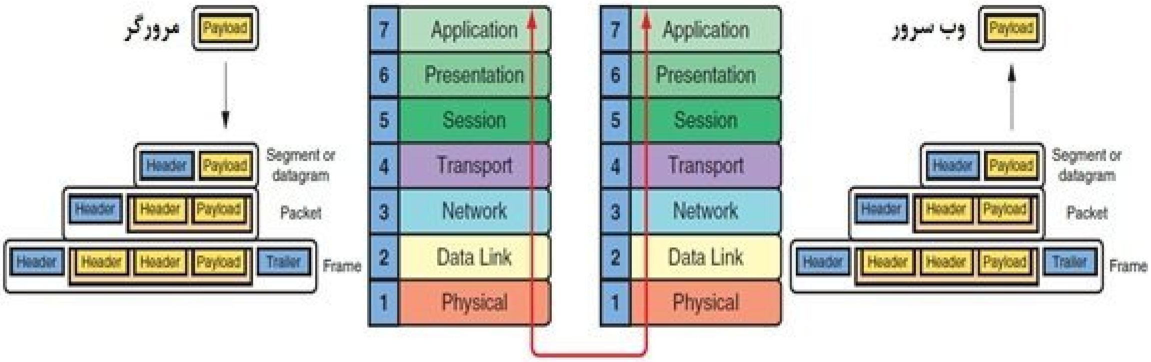
[illegible] Network+ [illegible]

[illegible] OSI [illegible]

[illegible] TCP/IP

TCP/IP [illegible] ARP [illegible] DUP [illegible] IP(IPv4/Ipv6) [illegible] TCP [illegible]

[illegible]


مرورگر
Payload
Header
Payload
Segment or datagram
Header
Header
Payload
Packet
Header
Header
Header
Payload
Trailer
Frame
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical
وب سرور
Payload
Header
Payload
Segment or datagram
Header
Header
Payload
Packet
Header
Header
Header
Payload
Trailer
Frame

هر لایه داده ها و آدرس های خود را برای انتقال اطلاعات به سمت دستگاه موردنظر به لایه های متناظر اضافه می کند

[illegible] 7، 6 و 5 [illegible] OSI [illegible]

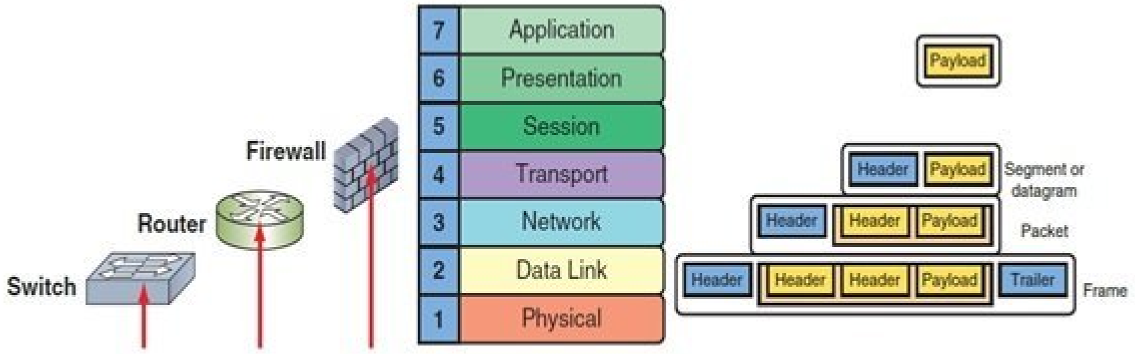
[illegible] 4- [illegible] TCP [illegible] UDP [illegible] TCP [illegible] UDP [illegible]

[illegible] 3- [illegible]

[illegible] 2- [illegible]

[illegible] 1- [illegible]

[illegible] OSI [illegible] 2 [illegible] 3 [illegible]


Switch
Router
Firewall
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical
Payload
Header
Payload
Segment or datagram
Header
Header
Payload
Packet
Header
Header
Header
Payload
Trailer
Frame

Transmission Control [illegible] (TCP) [illegible] Protocol

[illegible] OSI [illegible] TCP [illegible]
[illegible]
[illegible] TCP [illegible] TCP
[illegible]

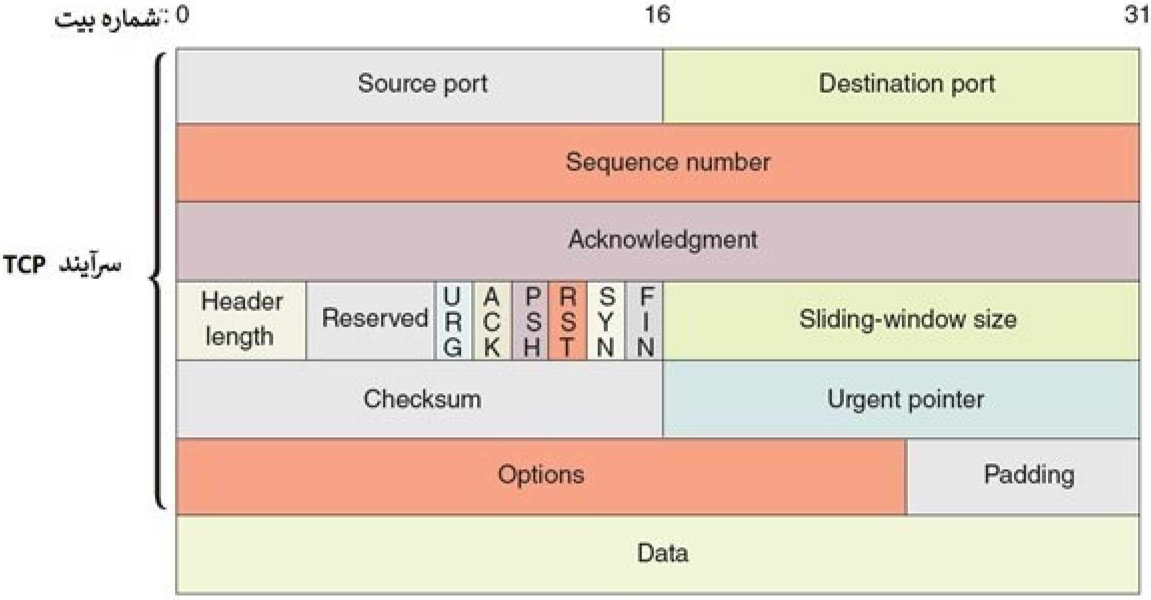
[illegible] TCP [illegible] -[illegible]
[illegible]
[illegible] TCP [illegible]
[illegible] TCP [illegible]
[illegible] TCP [illegible]
[illegible] HTTP [illegible]
[illegible]

[illegible] -[illegible]
[illegible]
[illegible] (checksum) [illegible] TCP [illegible]
[illegible] TCP [illegible]
[illegible]
[illegible] TCP [illegible]
[illegible]
[illegible]

[illegible] -[illegible]
[illegible]
[illegible]
[illegible]
[illegible] 4000 [illegible]
[illegible] 4000 [illegible]
[illegible]
[illegible] TCP [illegible]
[illegible] TCP [illegible]
[illegible] TCP [illegible]

[illegible] TCP

[illegible] TCP [illegible]. [illegible] 32 [illegible]. [illegible] TCP [illegible] TCP [illegible].


شماره بیت: 0
16
31
سرآیند TCP
Source port
Destination port
Sequence number
Acknowledgment
Header length
Reserved
URG
ACK
PSH
RST
SYN
FIN
Sliding-window size
Checksum
Urgent pointer
Options
Padding
Data

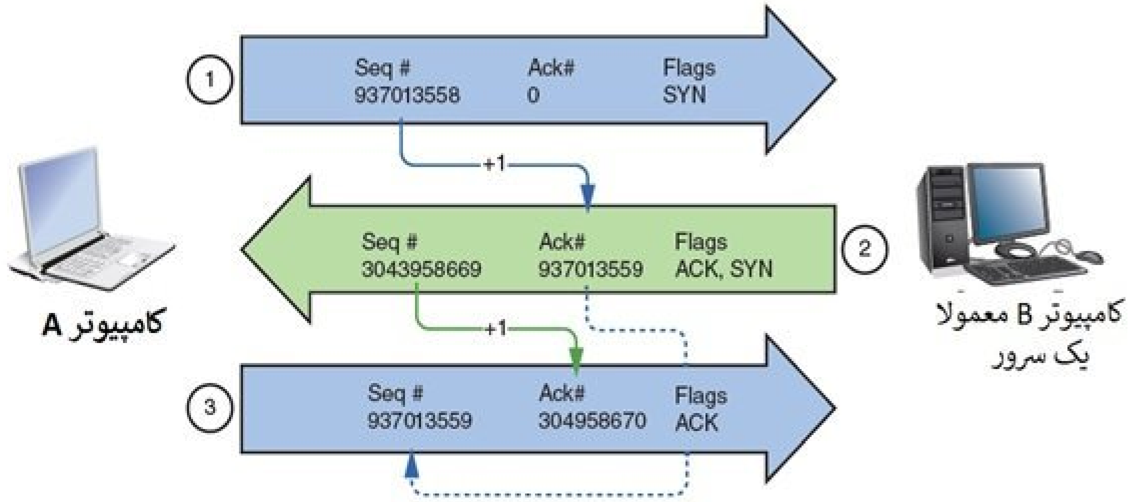
یک سگمنت TCP

[illegible]: [illegible] 32 [illegible] words [illegible]. [illegible] word ([illegible]) 4 [illegible] 8 [illegible]. [illegible] 32 [illegible]. [illegible] TCP [illegible]. [illegible] TCP [illegible]. [illegible].

[illegible]	[illegible]	[illegible]	
[illegible]	bits 16	Source port	[illegible]
[illegible]	bits 16	Destination port	
[illegible]	bits 16	Sequence number	
[illegible]	bits 32	Acknowledgment number	
[illegible] TCP [illegible] 20 [illegible] 60 [illegible] Data offset [illegible].	bits 4	TCP header length	
[illegible]	bits 6	Reserved	
[illegible] 1 [illegible]: URG: [illegible] 1 [illegible] Urgent [illegible]. [illegible] 0 [illegible] Urgent [illegible]. ACK: [illegible] 1 [illegible] Acknowledgment [illegible]. [illegible] 0 [illegible] Acknowledgment [illegible]. PSH: [illegible] 1 [illegible]. RST: [illegible] 1 [illegible]. SYN: [illegible] 1 [illegible] Acknowledgment number [illegible] 1 [illegible]. [illegible] ACK [illegible] SYN 1 [illegible]. FIN: [illegible] 1 [illegible].	bits 6	Flags	
[illegible]	bits 16	Sliding-window (size (or window	
[illegible] TCP [illegible]	bits 16	Checksum	
[illegible]	bits 16	Urgent pointer	
[illegible]	32–0 bits	Options	
[illegible] padding [illegible] TCP [illegible] TCP [illegible] TCP [illegible] 32 [illegible] 32 [illegible].	[illegible]	Padding	
[illegible] TCP [illegible] TCP [illegible] TCP [illegible].	[illegible]	[illegible]	

[illegible] TCP

[illegible] TCP [illegible]. [illegible]. [illegible]. [illegible]. [illegible] TCP [illegible].



1
Seq #
937013558
Ack#
0
Flags
SYN
+1
2
Seq #
3043958669
Ack#
937013559
Flags
ACK, SYN
+1
3
Seq #
937013559
Ack#
304958670
Flags
ACK
کامپیوتر A
کامپیوتر B معمولا یک سرور

فرآیند دست دهی سه مرحله ای در یک نشست TCP

[illegible]:

[illegible] 1: SYN ([illegible]) A [illegible] B [illegible].

- Sequence number [illegible] A [illegible] 937013558 [illegible].
- SYN [illegible] 1 [illegible] SYN [illegible]. [illegible]. A [illegible] B [illegible].
- ACK [illegible] 0 [illegible] B [illegible].

[illegible] 2: SYN/ACK ([illegible]) - [illegible] B [illegible]:

- ACK [illegible] SYN [illegible] 1 [illegible]. [illegible]: "[illegible]."
- Acknowledgment number [illegible] A [illegible]. (1 [illegible]) [illegible] B [illegible] 937013559 [illegible]. [illegible] B [illegible] A [illegible]. [illegible] B [illegible] A [illegible] 937013559 [illegible].
- Sequence number [illegible] B [illegible]. [illegible] 3043959669 [illegible].

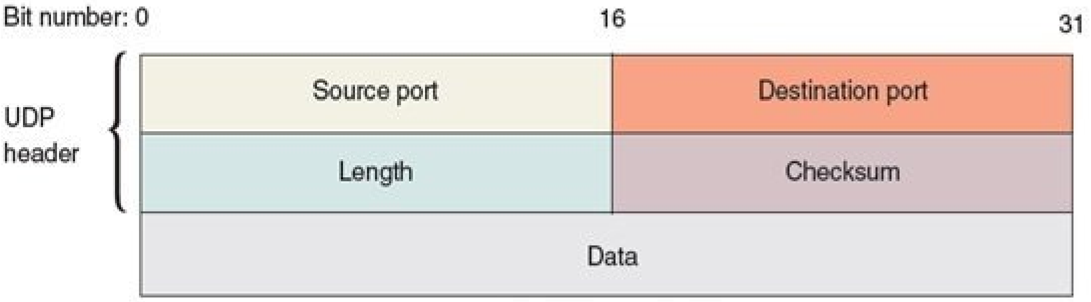
[illegible] 3: ACK ([illegible]) - A [illegible].

- Sequence number [illegible] 937013559 [illegible] B [illegible].
- [illegible] Acknowledgment number [illegible] B [illegible] 1 [illegible]. [illegible] 3043959670 [illegible].
- [illegible] ACK [illegible] 1 [illegible]. [illegible]. [illegible] A [illegible].

[illegible] 1 [illegible]. [illegible]. [illegible]. [illegible]. [illegible] A [illegible]. [illegible] (HTTP [illegible]) [illegible]. [illegible] A [illegible] 725 [illegible]. [illegible] B [illegible] 725 [illegible] 937013559 [illegible]. [illegible] 937014284 [illegible]. ([illegible].) [illegible] A [illegible] FIN [illegible] 1 [illegible]. [illegible].

[illegible] (UDP) [illegible] User Datagram Protocol

[illegible] UDP [illegible]. [illegible]. [illegible] UDP [illegible]. [illegible] UDP [illegible] TCP [illegible]. [illegible] UDP [illegible]. UDP [illegible]. [illegible]. [illegible]. [illegible] 10 [illegible] TCP[illegible] DUP [illegible] Checksum [illegible]. [illegible] Checksum [illegible] IPv4 [illegible] IPv6 [illegible]. [illegible].


Bit number: 0
16
31
UDP header
Source port
Destination port
Length
Checksum
Data

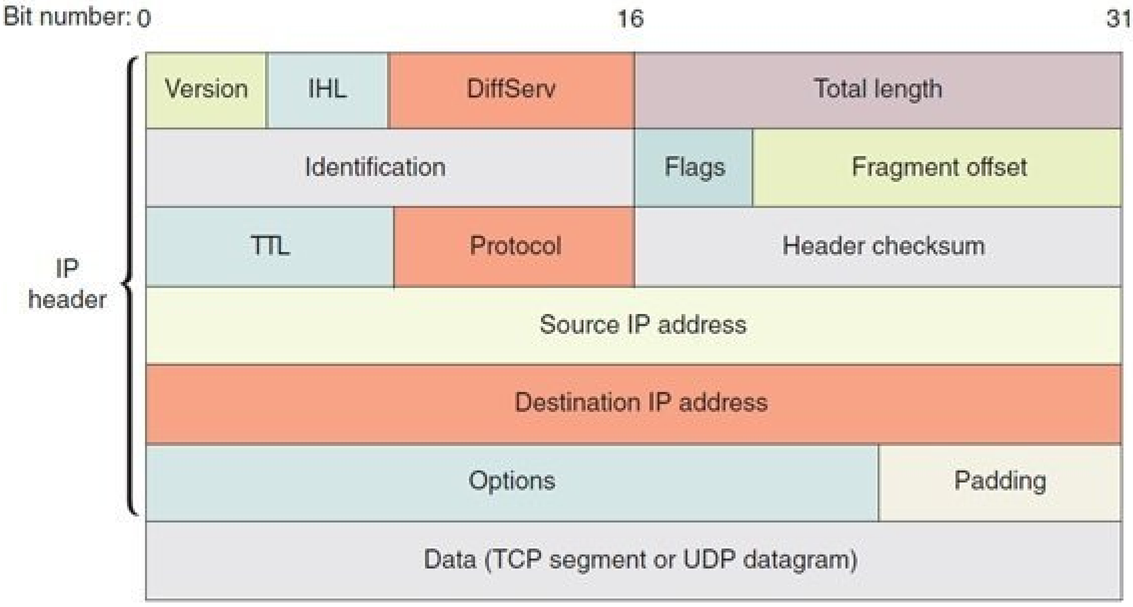
یک دیتاگرام UDP

[illegible] IP [illegible] Internet Protocol

[illegible] IP [illegible] OSI [illegible] IP. [illegible] TCP/IP [illegible] OSI [illegible] IP. [illegible] IP [illegible] TCP. IP [illegible] TCP [illegible] UDP [illegible] IP [illegible] IPv4. [illegible] 1981 [illegible] IPv6 [illegible] 1998 [illegible] IPv6 [illegible] IPv6 [illegible] IPv4 [illegible] IPv4 [illegible] IPv6 [illegible].

[illegible] IPv4

[illegible] IPv4 [illegible].


Bit number: 0
16
31
IP header
Version
IHL
DiffServ
Total length
Identification
Flags
Fragment offset
TTL
Protocol
Header checksum
Source IP address
Destination IP address
Options
Padding
Data (TCP segment or UDP datagram)

[illegible] [illegible]. [illegible] IPv4 [illegible].

[illegible]	[illegible]	[illegible]	
[illegible] IP [illegible] IPv4 [illegible] .Ipv6 [illegible]	bits 4	Version	[illegible]
[illegible] 20 [illegible] 60 [illegible] Data offset [illegible]	bits 4	IHL (Internet (header length	
[illegible]	bits 8	DiffServ (Differentiated (services	
[illegible] 65353 [illegible]	bits 16	Total length	
[illegible] Flags [illegible] Fragment offset [illegible]	bits 16	Identification	
[illegible]	bits 3	Flags	
[illegible]	bits 13	Fragment offset	
[illegible] TTL [illegible] 32 [illegible] 64 [illegible] TTL [illegible] TTL [illegible] 0 [illegible] TTL [illegible] ICMP [illegible]	bits 8	TTL (Time to (Live	
[illegible] (ICMP [illegible] TCP، UDP	bits 8	Protocol	
[illegible]	bits 16	Header checksum	
[illegible]	bits 32	Source IP address	
[illegible]	bits 32	Destination IP address	
[illegible]	Variable	Options	
[illegible] 32 [illegible]	Variable	Padding	
[illegible]	Variable	Data	

[illegible]:

[illegible] [illegible]

[illegible] [illegible]:

[illegible] [illegible]

[illegible] [illegible]:

20:20 - 10/08/1398

[illegible]:

[illegible] [illegible] - [illegible] [illegible] - [illegible] [illegible]

[illegible]

[illegible]: https://www.shabakeh-mag.com/networking-technology/16171/%D8%A2%D8%B4%D9%86%D8%A7%DB%8C%DB%8C-%D8%A8%D8%A7-%D9%BE%D8%B1%D9%88%D8%AA%DA%A9%D9%84%E2%80%8C%D9%87%D8%A7-%D9%88-%D9%85%D8%B3%DB%8C%D8%B1%DB%8C%D8%A7%D8%A8%DB%8C-%D8%B4%D8%A8%DA%A9%D9%87