|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **00-14-22-01-23-45** | IP address | IPv6 | MAC address | Port number |
| 128 bits | IP address | IPv6 | MAC address | IPv4 |
| 16 bits | IP address | IPv6 | MAC address | Port number |
| 23.32.125.65 | IP address | IPv6 | MAC address | Port number |
| 301 | HTTP | IP address | Status code | Success |
| 32 bits | IP address | IPv6 | MAC address | Port number |
| 3327 | IP address | IPv6 | MAC address | Port number |
| 4-5 layers | Layering | OSI model | Data flow | TCP/IP model |
| 48 bits | IP address | IPv6 | MAC address | Port number |
| 4-octets | IP address | IPv6 | MAC address | Port number |
| 4-tuples | TCP | UDP | TCP socket | Demultiplexing |
| 6-octets | IP address | IPv6 | MAC address | Port number |
| A, CNAME, NS, MX | URL | Application | DNS | HTTP |
| acknowledgement | Application | Presentation | Transport | Session |
| Address of a Web | FTP | URL | SMTP | HTTP |
| All nodes are equal | Network core | LAN | Peer-to-peer | Central node |
| Analog-> Digital | Modulation | Demodulation | Modem | Transmission |
| Ascending order of coverage? | LAN - WAN -MAN- PAN -Internet | PAN- WAN -MAN- LAN -Internet | PAN-LAN-MAN-WAN-Internet | PAN-MAN-WAN-Internet-LAN |
| Bus-Ring | Network Topology | Access network | TCP | Geometry |
| Central element of network | User | Network core | Central server | Router |
| Centralized server | Client-Server | LAN | Peer-to-peer | Central node |
| client/server model | FTP | URL | SMTP | HTTP |
| Close connection | PPP | TCP | IMAP | UDP |
| Compression | Application | Presentation | Transport | Session |
| connection control | PPP | TCP | IMAP | UDP |
| Connectionless | Demultiplexing | Transport | TCP | UDP |
| Connection-Oriented | Demultiplexing | Transport | TCP | UDP |
| Controls sending and receiving of message | IFC | Protocol | Packet | Network |
| decimal | IP address | IPv6 | MAC address | Port number |
| Defines the rules, syntax and semantics and synchronization of the communication | Access network | Cable | Protocol | Physical media link |
| delivery/storage of e-mail messages | HTTP | IMAP | SMTP | POP3 |
| Email’s interface | HTTP | IMAP | SMTP | POP3 |
| Encryption (Decryption) | Application | Presentation | Transport | Session |
| establish a connection | ACK | SYN-ACK | SYN | FIN |
| ethernet, hub,switch | LAN | WAN | MAN | PAN |
| FDM- TDM | Circuit switching | Network core | Packet switching | packet transmission |
| FTP -POP -SMTP | Application | Presentation | Transport | Data link |
| Gathering | Demodulation | Multiplexing | Modulation | Demultiplexing |
| Half-duplex | Data flow | P2P |  | Coaxical cable |
| hardware address | IP address | IPv6 | MAC address | Port number |
| has received the SYN | ACK | SYN-ACK | SYN | FIN |
| hexadecimal | IP address | IPv6 | MAC address | Port number |
| high-level API | Application | Presentation | Transport | Network |
| Human-computer interaction layer | Application | Presentation | Transport | Network |
| Interface between host and network | IP address | IPv6 | MAC address | Port number |
| Internet Protocol | Application | Presentation | Transport | Network |
| IP address- port number | Application | Presentation | Transport | Session |
| IP datagram | Segment | IP address | MAC address | Port number |
| ISP | RFC | Internet | Application layer | Network edge |
| Iterated- Recursive | URL | Application | DNS | HTTP |
| Mail services  Directory service | Application | Presentation | Transport | Session |
| Message Queue | Mail server | IMAP | SMTP | Email |
| message segmentation | Application | Presentation | Transport | Session |
| multi-node routing | Application | Presentation | Transport | Network |
| Persistent- Non-persistent | FTP | DNS | SMTP | HTTP |
| Port addressing | Application | Presentation | Transport | Session |
| POST-GET-HEAD-PUT | FTP | Application | SMTP | HTTP |
| processes | IP address | IPv6 | MAC address | Port number |
| raw bits stream | Physical | Presentation | Transport | Data link |
| Reliable | PPP | TCP | IMAP | UDP |
| Request message  Response message | FTP | Application | SMTP | HTTP |
| retrieve e-mail messages | HTTP | IMAP | SMTP | UDP |
| router | LAN | WAN | MAN | PAN |
| Router, hub, switch, computer,… | Link | Protocol | Node | Computer network |
| Satellite, Radio, … | Link | Protocol | Node | Internet |
| Segment header | IP address +port number | IP address | MAC address | Port number |
| SMTP | HTTP | Email | Application | Web browser |
| SYN, ACK, SYN-ACK, FIN | Establish connection | TCP message | handshake | UDP message |
| Synchronization | Application | Presentation | Transport | Session |
| terminate a connection | ACK | SYN-ACK | SYN | FIN |
| Top Level Domain | URL | Transport | DNS | HTTP |
| Unordered delivery | PPP | TCP | IMAP | UDP |
| User-agent | Computer network | Email | Node | SMTP |
| user's browsing activity | DNS | Cookies | FTP | Caches |
| WiFi | Application | Presentation | Transport | Data link |
| Wi-fi | LAN | WAN | MAN | PAN |
| ZigBee | LAN | WAN | MAN | PAN |

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| --- | --- |
| Layers of OSI model |  |
| Layer of TCP/IP model |  |
| DNS |  |
| TCP |  |
| UDP |  |
| ISP |  |
| HTTP |  |
| SMTP |  |
| CS |  |
| P2P |  |
| PAN |  |
| MAN |  |
| WAN |  |
| OSI |  |
| IP |  |
| MAC |  |
| URL |  |
| TLD |  |