Chiều dài header chia 4 mới được ghi vào tệp tin

Khi đi qua 1 router thì time to live -1, header checksum thay đổi.

15- A host is sending 100 datagrams to another host. If the identification number of the first datagram is 1024, what is the identification number of the last (in IPv4)?

The identification field is incremented for each non-fragmented datagram. If the first is 1024, then the last is 1024 + 99 = 1123

18- Calculate the HLEN (in IPv4) value if the total length is 1200 bytes, 1176 of which is data from the upper layer.

Header Length = Total Length - Data Length = 1200 − 1176 = 24

HLEN = 24/4 = 6 (in decimal) → 0110 (in binary)

19- An IPv4 datagram is carrying 1024 bytes of data. If there is no option information, what is the value of the header length field? What is the value of the total length field?

Since there is no option information, the header length is 20, which means that the value of HLEN field is 5 or 0101 in binary. The value of total length is 1024 + 20 or 1044 (00000100 00010100 in binary).

23- The value of HLEN in an IPv4 datagram is 7. How many option bytes are present?

If the value of the HLEN field is 7, there are 28 (since 7 × 4 = 28) bytes included in the header. There are 20 bytes in the base header, so the total number of option bytes must be 8.

@ The value of the header length field of an IP packet can never be less than 5 because every IP datagram must have at least a base header that has a fixed size of 20 bytes. The value of HLEN field, when multiplied by 4, gives the number of bytes contained in the header. Therefore the minimum value of this field is 5. This field has a value of exactly 5 when there are no options included in the header.

Khi nào cần VLAN: để tránh bão quảng bá, broadcast storm, khi một nhóm làm việc với nhau trên một VLAn sẽ tách biệt với các VLAN khác, tức là tách các mạng ra để tiện quản lý mà không cần nhiều thiết bị

- Tăng cường bảo mật: import sercurity

- Giảm chi phí

- Smaller Broadcast Domain Hạn chế kích thước miền quảng bá => hạn chế bão quảng bá, tăng cường gói tin quảng bá.

- IT Efficient : chia theo đội ngũ nhân viên IT, quản lý theo người dùng

- Management Efficient: quản lý theo vị trí địa lý (nhiều vị trí khác nhau)