IT Fundamentals

Unit - Networking

Lesson 2.7.4 - Packet Transmissions

IT Fundamentals Objectives (FC0-U61)
Objective 2.7 - Explain basic network concepts.
- Basics of packet transmission

Grade Level(s)
8, 9

Cyber Connections
- Networks & Internet

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Packet Transmissions

How Many Packets of Ketchup?

Did you know that EVERYTHING you do on the Internet involves *packets*? Every webpage that you receive comes as a series of packets and every email you send leaves as a series of packets. Networks that ship data around in small packets are called *packet switched networks*.

The majority of network packets are split into three parts, the *header*, the *payload*, and the *trailer*. The header includes instructions regarding the data carried by the packet. Some examples are: the length of the packet, the protocol, the packet number, and the destination/originating addresses. The payload, or sometimes called the body/data of a packet, is the actual data that the packet is sending to the destination. In case the packet is fixed-length, the payload may be *padded* with blank information to make it the appropriate size. The final piece, the trailer or footer, usually contains a few bits informing the receiver that it has reached the end of the packet. There may also be some sort of error checking, typically *cyclic redundancy check* (CRC). CRC is not tested on the CompTIA IT Fundamentals exam so we will not go into further detail.

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