Andrew Walwema

CSE 247

Professor Fu

An overview of how the internet works

The internet is system of interconnected computer networks around the world. There are packets filled with information that are exchanged between computers and servers connected to the internet. There are different types of network packets such as the ICMP Ping Packet, UDP Packet, and the TCP Packet. They all carry different forms of data. When you click on a link a flow of information is put into a packet that also contains the sender’s and receiver’s address and is sent to the Local Area Network (LAN) that connects all the local computers and routers which are located within the physical building. A local router reads the addresses of the packets and reroutes the packet to another network if necessary. Once the packet leaves the router, they head towards the router switch which is more efficient and accurate than the local router. Once the packets arrive to their destination the network interface picks up the packets and sends them to the proxy, which lessens the load on the internet connection and determines whether it is safe to send the information out to the internet by reading the web address (URL). If the URL is not acceptable, the packet is then destroyed. Once the proxy accepts the packets, they are sent to the firewall. The firewall prevents dangerous things from the internet entering to the intranet and it also prevents sensitive corporate information from being sent out to the internet. After going through the firewall, a router picks up the packet and places it on a bandwidth. Once placed onto the bandwidth, the packets are finally placed onto the internet. Routers and switchers establish links between the networks. Once a packet arrives to its destination, it has to go through a firewall and has to meet the firewall’s criteria. There are dangerous packets called the ping of death packet that tries to confuse the server, it’s the firewall’s job to make sure packets such as the ping of death packet don’t make it through. Once the packet gets completely through the firewall it is placed onto an interface that directs the packets to the web server. The packets are then received, opened, and unpacked, the information from that packet is sent to the webserver application. The packet is reused and is re-filled with the users requested information which is then sent back to the user’s computer going through the same path that it took to get to the webserver.