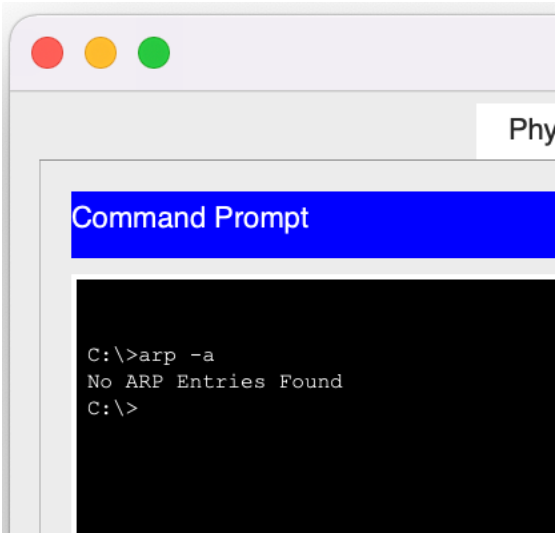
ARP-Demonstration

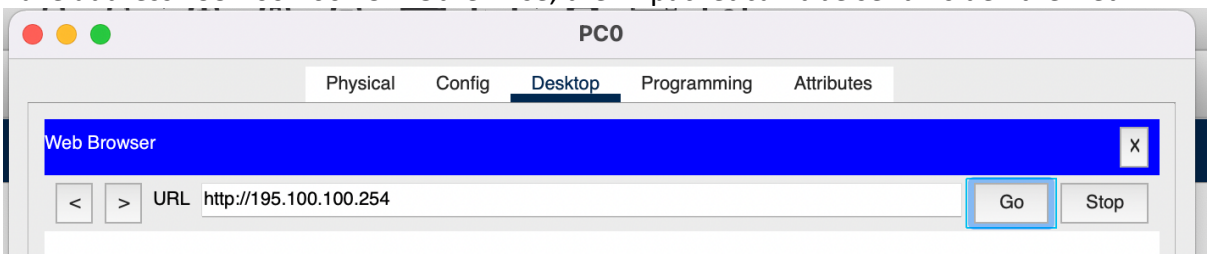
This document contains screen clips that demonstrate address resolution protocol (API).

Phase 1

Initial situation (PC0 ARP-cache empty)

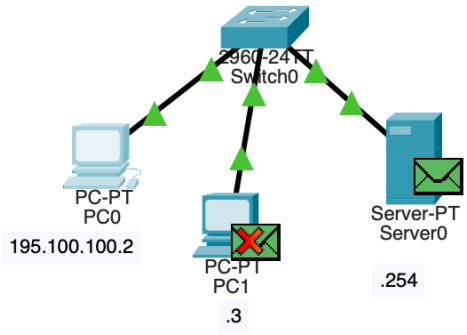


User tries to connect to server whose address is 195.100.100.254.
ARP that is between IP and Ethernet must try to resolve that mac-address of computer that have address 195.100.100.254. Otherwise, the IP-packet can't be sent inside Ethernet.



Phase 2,3

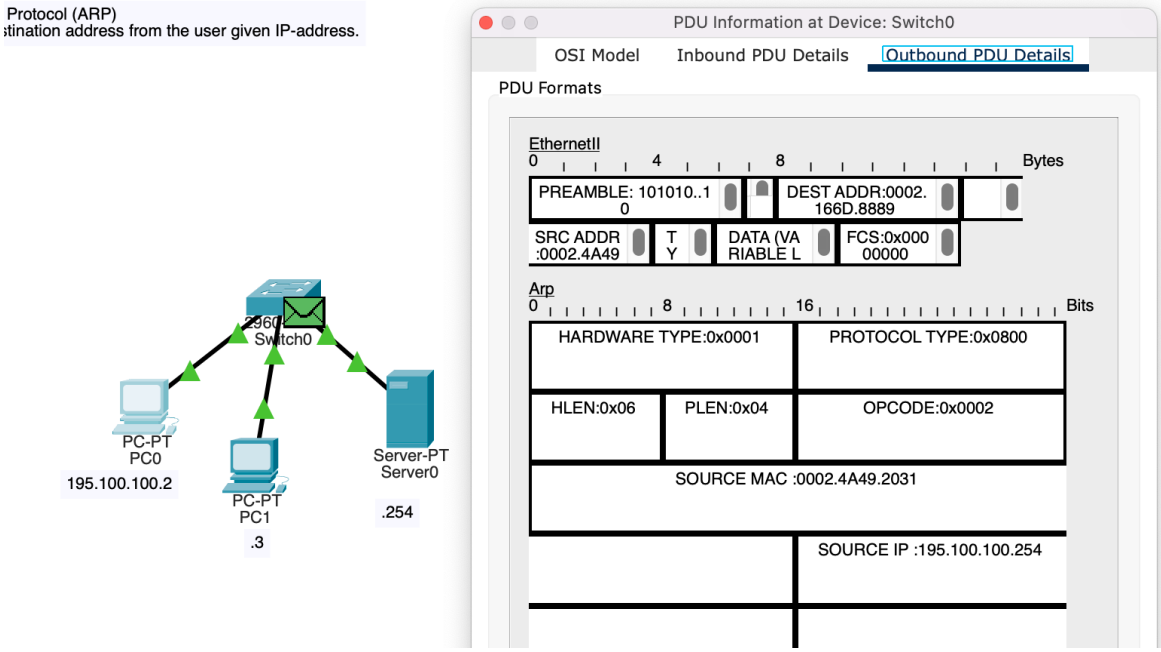
ARP sends inside ethernet frame a question to all computers. The question is “If your IP-address is 195.100.100.254 – please tell your MAC address to me.” The question is sent with MAC address FF:FF:FF:FF:FF:FF (This is broadcast address).



All computers must read the frame containing the question and give it to their ARP. The computer’s whose IP-address is not the one mentioned in question just delete after analyzing it.

Phase 4

Server (195.100.100.254) sends ARP-answer to PC0. The answer contains server’s MAC-address.



When PC0 APR get the answer, it stores it to APR cache memory. Now it can ask Ethernet to send the IP-packet to server because it can tell Ethernet the correct destination MAC-address.

Final situation