RJ45 Connector Lab

1. Why do we use the specific coloring scheme to create the Ethernet cable?

   The wiring scheme is important so computers know how to talk to each other. Though RJ45 cables have four pairs of wire (8 wires), only two pairs are actually used. Each pair has a specific purpose (transmit or receive) and connecting them to the wrong place will make communication impossible. The wiring scheme below is for a straight through cable, which uses pins 1, 2, 3, and 6 to connect Terminal Equipment (computers) to communications equipment such as switches and routers.

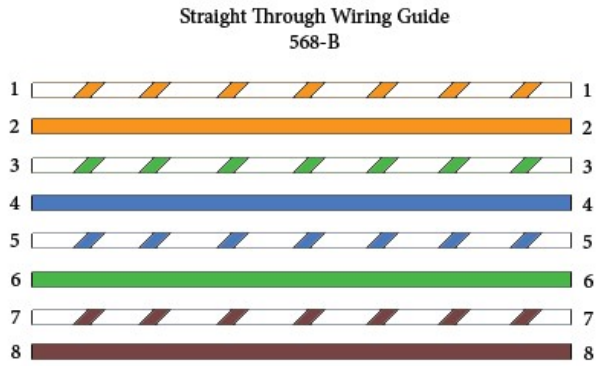
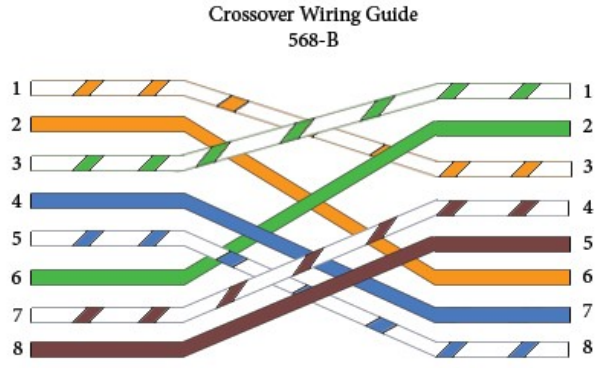


Image from https://www.computercablestore.com/straight-through-crossover-and-rollover-wiring

2. What other schemes are available and why?

   Beside straight through cables, there are two other types of cables as well:

   1. Crossover cables swap transmit and receive so two computers can communicate with each other directly.



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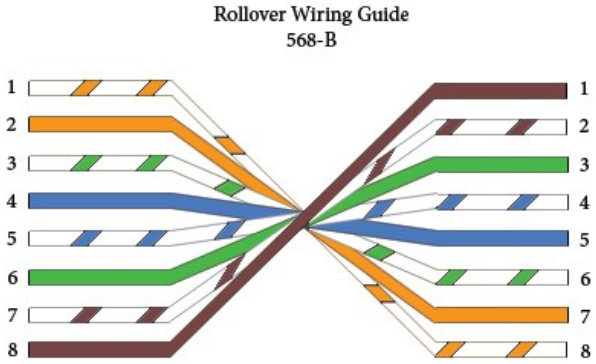
2. There are Rollover cables which are used to connect computers to console ports on network devices.



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