

IT 315 Hands-on exercise #2

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- Why is stranded rather than solid cable used for patch cables?
 - **Stranded cable is used instead of solid cable because stranded cable is more durable, meaning that stranded cable is inherently more reliable. While there are scenarios in which solid cable is a superior option to stranded cables, most use cases for patch cables benefit from stranded cables.**
- Why is it critical not to score the jacket too deeply when stripping the cable?
 - **When scoring the jacket of a cable, it is imperative to avoid cutting too deeply, as damaging the shielding of the wires will significantly reduce the reliability of the cable and possibly prevent the cable from functioning.**
- Why is it recommended to expose more than .5 inches of the wire pairs?
 - **When building a patch cable, exposing more than .5 inches of the wire pairs is recommended to make arranging the wires significantly easier. The wires are more manageable and can be easily verified to ensure proper insertion before crimping. Another benefit is reduced crosstalk between the wires as they are untwisted and aligned in a specific order.**
- Why is it critical to use the proper pin colors in order?
 - **Apart from complying with the industry standard, it is imperative to use the proper pin colors in order as the order will directly impact the reliability of the connection.**
- Why is it critical to cut the wire pairs off .5 inches or less before inserting into the connector?
 - **Removing some material from the end of the wires is imperative as it ensures that a straight line is created across the wires; this not only makes inserting the wires easier but removes pieces of the wire that may have been damaged during the initial cut.**
- Why is it critical to ensure all wires are pushed to the end of the connector?
 - **Failing to ensure that all wires are pushed to the end of the connector could result in an unreliable connection, as depending on the severity of the variation, some wires may not make proper contact with the pins on the connectors.**
- Why is it recommended to double-check the wire order and ensure the wires are to the end before crimping?
 - **Double checking your work is recommended as if a mistake has been made somewhere in the process, after crimping, it will no longer be possible to correct the mistake without restarting the process with a new connector.**
- How is a continuity tester different from a certification tester?

- A continuity tester is used to verify the integrity of a cable's physical connection. In contrast, a certification tester ensures that a cable meets industry standards and can reliably support a network connection.

