Cable Descriptions

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Cable Descriptions

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Introduction

This document explains how to use different types of cables with Cisco equipment.

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Requirements

There are no additional requirements for this document.

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RJ-45 Cable Types

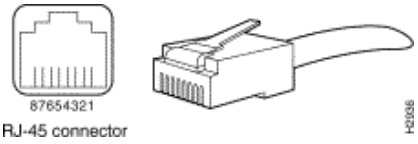
Cisco products use these RJ-45 cable types:

- Straight-through
- Crossover
- Rolled
- Console

Straight-through, crossover, and rolled cables look identical but are wired differently. For information about each cable type, see Identify an RJ-45 Cable.

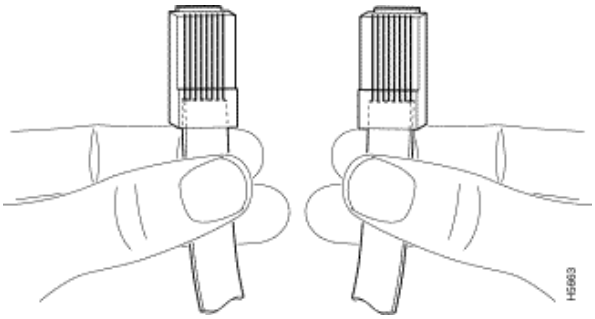
For information on how to choose the right cable, see Select the Correct Cable.

Identify an RJ-45 Cable



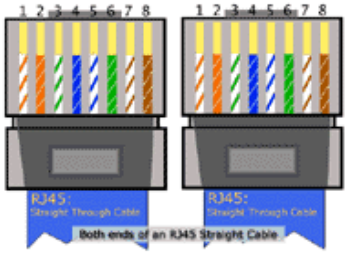
RJ-45 connector

To identify the RJ-45 cable type, hold the connectors together so you can see the colored wires, as shown in the picture.



Examine the sequence of colored wires to determine the type of RJ-45 cable. There are four types of commonly used RJ-45 cables: straight-through, crossover, rolled, and console.

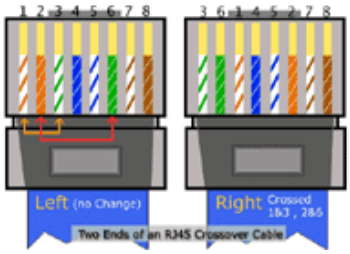
Straight-Through Cable



A straight-through cable contains colored wires in the same sequence at both ends of the cable. Straight-through cables are the most common RJ-45 cable and are used to connect network devices to an Ethernet switch.

To learn how you can use a straight-through cable, see Select the Correct Cable.

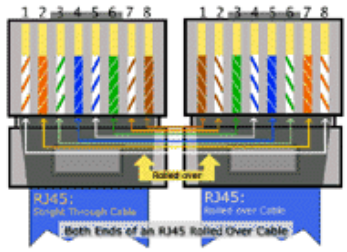
Crossover Cable



A crossover cable has four colored wires that are in reverse sequence on each end of the cable. Wires 1 and 3 and wires 2 and 6 are at opposite positions on each side of the cable. Crossover cables commonly connect two Ethernet devices.

To learn how you can use a crossover cable, see Select the Correct Cable.

Rolled Cable



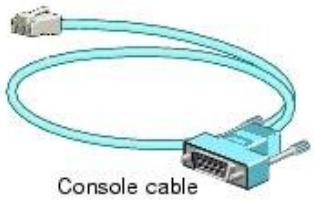
A rolled cable contains wires that are in reverse sequence at each end of the cable. Rolled cables commonly connect digital telephones, ISDN, T1, and serial RS-232 devices.

Note: Rolled cables allow you to manage your Cisco device. You need an adapter to use a rolled cable to connect your PC to a Cisco device. See Adapters for more information.

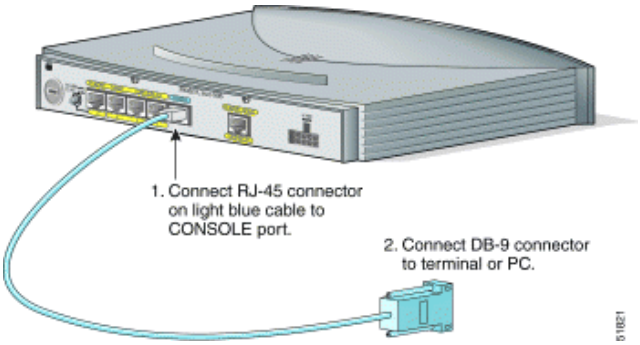
Console Cable

The console cable allows you to access your Cisco device directly in order to make configuration changes or troubleshoot problems. A console cable has RJ-45 and DB-9 female connectors and is also known as a

management cable.



The console cable connects the serial port of your PC to the console port of your Cisco device. This example uses a Cisco 800 series router.



You can then create a console connection from your PC to the Cisco device with terminal emulation software such as HyperTerminal. For additional information on how to create a console connection, refer to Create a HyperTerminal Connection.

Adapters

Adapters allow you to use cables with different types of ports. There are two types of adapters: RJ-45 to DB-9 and RJ-45 to DB-25.

RJ-45 to DB-9 Adapter	RJ-45 to DB-25 Adapter
 DB-9-to-RJ-45 console adapter	 DB-25-to-RJ-45 modem cable adapter

Adapters allow you to:

- Covert a rolled cable from RJ-45 to DB-9. This allows you to use a rolled cable as a console cable.
- Convert a cable with a DB-9 connector to DB-25. This allows you to create a console connection to a computer with an older DB-25 serial port.

For more information on how to create a console connection, refer to Create a HyperTerminal Connection.

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Select the Correct Cable

Crossover and straight-through cables are used to connect network devices. Use the table to match the two devices you want to connect to determine which cable you need.

Note: Router includes devices such as Cisco Access Points and PIX Security Appliances.

	Hub	Switch	Router	PC

Hub	Crossover	Crossover	Straight-through	Straight-through
Switch	Crossover	Crossover	Straight-through	Straight-through
Router	Straight-through	Straight-through	Crossover	Crossover
PC	Straight-through	Straight-through	Crossover	Crossover

Note: To create a console connection between your PC and a Cisco device, see the Console Cable section.

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Related Information

- **Create a HyperTerminal Connection**
- **Configure an IP Address on Your PC**
- **Set Up a TFTP Server**