

Internet Connection Types

At the end of this episode, I will be able to:

1. Identify common Internet connection methods.

Exam Objective: *2.7 - Compare and contrast Internet connection types, network types, and their features.*

Description: In this episode, we discuss the popular way in which devices connect to the Internet such as fiber, cable, Dial-up, Public Switched Telephone Network line (PSTN), Digital Subscriber Line (DSL), cellular, satellite and Wireless Internet Service Providers (WISPs)

- Internet connection types
 - **Fiber (FiOS)**
 - Use optical network terminals (ONTs)
 - Gigabit speeds
 - **Cable**
 - Coaxial cabling (RG-6)

- Older technology
- DOCSIS standard
 - Data Over Cable Service Interface Specifications
- Shared connection
- Speeds vary
- **Dial-up**
 - Digital signals are sent over Public Switched Telephone Network (PSTN) or telephone lines
 - 56Kbps
 - Low cost
- **DSL**
 - Digital Subscriber Line
 - Digital signals over analog telephone lines
 - Allows for the use of phone and Internet at the same time
 - Requires proximity to the telecommunication switch

- Uses a modem
- 2 Mbps up to 100 Mbps+ depending on distance
- **Cellular**
 - Allows for mobile Internet access
 - 2G/3G/4G/5G
 - Availability based on cell tower placement
- **Satellite**
 - Commonly used for fixed wireless Internet connections
 - Also, used in rural areas where DSL and cable networks are not present or limited.
 - Line-of-sight (signal propagation issues)
 - Affected by weather
- **Wireless Internet service provider (WISP)**
 - Used in rural areas where DSL and cable networks are not present or limited.
 - Uses a variety of technologies

- Some are standardized like Wi-Fi mesh networks
 - Some are proprietary in nature
 - Uses a variety of frequencies including 2.4 and 5 GHz
 - Line-of-sight (signal propagation issues)
 - Affected by weather
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- Additional Reference Materials
 - Not applicable if blank