



# Differentiating Layer-2 Technologies

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CCIE Routing & Switching

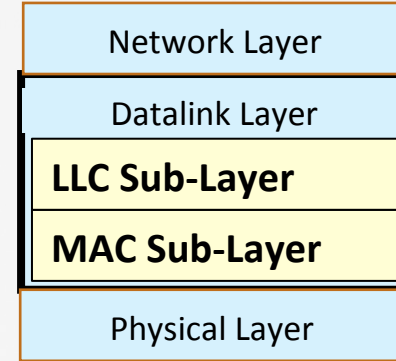


# Video Overview

- Differentiate between these Layer 2 technologies: Ethernet, Fast Ethernet, Gigabit Ethernet, Serial, ATM, ISDN, DSL, Optical, and etc.

# What is the purpose of “Layer-2”?

- » Media-Access Control
- » Link-Layer Addressing
- » Error Checking



- » Devices used at the Data Link layer
  - Switches, Bridges

# Differentiating Protocols

	Ethernet	Fast Ethernet	Gigabit Ethernet	ATM	ISDN	Frame-Relay	PPP	HDLC
Used in LANs	X	X	X					
Used in WANs				X	X	X	X	X
Broadcast Based	X	X	X					
Point2Point				X	X	X	X	X
Requires Setup Signalling				X (SVC)	X	X (SVC)	X	
Dedicated, Always "on"	X	X	X	X (PVC)		X (PVC)		X
Has L1 and L2 in Spec	X	X	X	X	X			