

# Juniper Networking Fundamentals (Associate)

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## Course Details

### Course Outline

#### 1. What is a network?

- Network models
- How data flows from one computer to another
- Network addressing

#### 2. Ethernet LANs

- How Ethernet networks operate
- Early Ethernet network devices, including hubs and bridges
- Today's Ethernet network devices, including switches and Virtual LANs (VLANs)
- Wireless LANs

#### 3. Routing basics

- Layer 2 and 3 addressing
- Interconnecting different broadcast domains using routers
- Address resolution
- How data is sent from one broadcast domain or network to another

#### 4. IP addressing

- Internet Protocol (IP)
- IP addressing
- Network masks
- Working with binary numbers
- Subnetting
- Routing data through a network using longest match routing
- IPv6 Addressing

#### 5. WAN technologies

- Point-to-Point Protocol (PPP)
- Frame Relay and Asynchronous Transfer Mode (ATM)
- Multiprotocol Label Switching (MPLS)
- Carrier Ethernet

#### 6. Transport Layer protocols

- User Datagram Protocol (UDP)
- Transmission Control Protocol (TCP)