

**CN LAB**

***TASK 2***

**Submitted by:**

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**Section:** 5A

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**Task 1: Why Are We Using the 2911 Router and Not the Others?**

The **Cisco 2911 Router** is chosen for several reasons in many lab environments:

1. **Modular Design**:
   * The 2911 router has a modular design that supports multiple interface cards for future upgrades or expansion, which makes it highly flexible for lab setups.
2. **Medium-Sized Network Capability**:
   * It is ideal for medium-sized networks, offering enough performance for tasks such as routing between VLANs, supporting WAN protocols, and running security features.
3. **Advanced Services**:
   * The 2911 supports advanced services like VoIP (Voice over IP), VPN, and QoS (Quality of Service), which are crucial for teaching a wide range of networking concepts in labs.
4. **Cost and Performance Balance**:
   * Compared to higher-end routers (like 4331), the 2911 provides a good balance between cost and performance, making it suitable for educational and medium-scale deployments without over-investing in high-performance models.
5. **Compatibility and Features**:
   * It offers a wide range of connectivity options such as Fast Ethernet, Gigabit Ethernet, serial connections, and other WAN options that are common in lab setups.

**Task 2: Why Are We Using the 2950T or 2960 Switch and Not the Others?**

The **2950T** or **2960** switches are used because of the following reasons:

1. **Basic Layer 2 Functionality (2950T)**:
   * The 2950T switch is a basic Layer 2 switch, making it ideal for simple network setups where advanced Layer 3 features like routing between VLANs are not required.
   * It provides all the basic switching functions, such as creating VLANs and connecting end devices to a LAN, which is usually enough for foundational networking labs.
2. **Modern Layer 2/3 Capabilities (2960)**:
   * The 2960 switch is more advanced compared to the 2950T, offering Layer 2 switching and basic Layer 3 routing capabilities (e.g., inter-VLAN routing).
   * It is often used for labs that require students to configure both basic and slightly advanced network setups, such as working with VLANs, QoS, and security features.
   * The 2960 also supports Gigabit Ethernet ports, offering faster network speeds and better scalability for growing networks.
3. **Affordability and Availability**:
   * Both 2950T and 2960 switches are cost-effective and widely available for educational use. They offer the features needed for most lab environments without adding unnecessary complexity or cost.
4. **Educational Focus**:
   * In lab environments focused on learning core switching concepts, the simplicity of the 2950T or the more versatile 2960 switch is often sufficient, allowing students to focus on basic networking tasks without being overwhelmed by unnecessary advanced features.

**Task 3: Design the Network of "Lab-7" or "Lab-8"**

**A computer screen shot of a computer

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