

Ethernet VLANs

As the communications industry transitions to wireless and wireline converged networks to support voice, video, data and mobile services over IP networks, a solid understanding of Ethernet and its role in networking is essential. Ethernet is native to IP and has been adopted in various forms by the telecom industry as the Layer 1 and Layer 2 of choice. VLANs are used extensively in the end-to-end IP network and a solid foundation in IP and Ethernet has become a basic job requirement for the carrier world. Starting with a brief history, the course provides a focused basic level introduction to the fundamentals of Ethernet VLAN technology. It is a modular introductory course only on Ethernet VLAN basics as part of the overall eLearning IP fundamentals curriculum. The course includes a pre-test and a post-test.

Intended Audience

This course is intended for those seeking a basic level introduction to Ethernet Bridging.

Objectives

After completing this course, the student will be able to:

- Define Ethernet VLANs
- Identify Ethernet VLAN applications and benefits
- Summarize the key variations of the Ethernet family of standards to support VLANs
- Identify the key types of Ethernet VLANs
- Describe VLAN Trunks and their purpose

What You Can Expect

- Self-Paced Duration: 1.5 HOUR

Outline

1. Virtual Local Area Networks (VLANs)

- 1.1 VLAN Definition
- 1.2 Characteristics of LAN
- 1.3 Packet flow in VLAN
- 1.4 Advantages of VLAN

2. VLAN Application and Benefits

- 2.1 VLAN Applications
- 2.2 VLAN Benefits

3. Single Switch VLANs

- 3.1 Port based VLAN

4. Multi-Switch VLANs: Trunks and Tagging

- 4.1 Multi-Switch VLANs
- 4.2 VLAN tags
- 4.3 VLAN Trunks

Putting It All Together