# **Ethernet Bridging**

# IPC\_116d | On-Demand | Transport | Express Course Duration: 1.5 hours

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 technology of choice. Ethernet bridging and associated capabilities are used extensively in the end-to-end IP network and a solid foundation in IP and Ethernet has become a basic job requirement in the carrier world. Starting with a brief history, the course provides a focused basic level introduction to the fundamentals of Ethernet Bridging as a key capability of Ethernet based nodes.

## **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:

- Introduce Ethernet bridges and explain how they operate
- Introduce Ethernet switches and explain how they differ from Ethernet bridges
- Discuss Spanning Tree Protocol and its variations
- Introduce the concept of multilayer switching
- Discuss the use of link aggregation group in Ethernet networks

## **Course Prerequisites**

No Prerequisites

## Outline

- Ethernet Bridge
  1.1 Definition
  1.2 History
  1.3 Learning bridge
- 2. Ethernet Switch
  2.1 Definition
  2.2 History
  2.3 Ethernet switching
  2.4 Full duplex operation
- 3. Spanning Tree Protocol (STP)3.1 Function3.2 Operation3.3 Variants

4. Multilayer Switch (MLS)4.1 Definition4.2 Function

5. Link Aggregation Group5.1 Definition5.2 Uses

6. Summary



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