# 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

1. 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 Function
3.2 Operation
3.3 Variants

4. Multilayer Switch (MLS)
4.1 Definition
4.2 Function

5. Link Aggregation Group
5.1 Definition
5.2 Uses

6. Summary

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