

Ethernet Bus

2 days - 14 hours

OBJECTIVES

- Training aims are to provide all the knowledge and terms necessary for understanding an Ethernet bus network.
- This training focuses mainly on general principles and on the popularization of the Ethernet bus

RELATED TRAININGS

- Ethernet & Switching

PREREQUISITES

- no pre-requisites necessary

PARTNERS



CHAPTERS

INTRODUCTION TO ETHERNET

- Generalities
- The OSI Model
- Wiring
- Topologies
- Equipments:
 - hub
 - switch
 - and router

PHYSICAL LAYER

- transmission media
- 10BaseT

- 100BaseTX
- 1000BaseT
- Collision, CSMA / CD, jamming, Backoff
- Auto-negotiation
- encodings
- Power Over Ethernet

LINK LAYER

- The Ethernet frame
- MAC address
- Burst and Jumbo frame
- The Switch
- Link aggregation
- VLANs
- Quality of service
- Flow control

THE NETWORK LAYER

- The router
- The IP protocol
- ICMP / IGMP
- ARP / RARP

THE TRANSPORT LAYER - INTRODUCTION

- TCP / UDP

THE APPLICATION LAYER - INTRODUCTION

- SNMP: Simple Network Management Protocol
- The DHCP

DOS INSTRUCTIONS

- Ping, Tracert, Route, Ipconfig, Arp, Netstat

LABS

- All layers will be based on several practical examples
 - an Ethernet frame analysis with Wireshark
 - Generating an Ethernet frame with Ostinato
 - Creating an IP network using TCP exchange analysis

CONTACT

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