
NBE

Networking for
Broadcast Engineers

Training Course Outline

2015



NBE : Networking for Broadcast Engineers

Duration: 2 Days

Technical Level: High

Overview

Networks are changing the way broadcast facilities function and how they are maintained by broadcast professionals. They are already being used for mission critical control and the movement of essential media assets. Today network technology has reached a point where time sensitive professional signal delivery is now possible. Yet many people working in the industry are not grounded in the basics of networking technology.

The course

This course has primarily been designed to explain fully the history, theory, function and processes underlying packet-switched network technology to those from a broadcast background.

The universal TCP/IP suite of addressing, control and transport protocols is fully examined. It will also cover subjects in networking which are particularly germane to the broadcast industry. There will be hands-on labs and demonstrations throughout.

The course is designed to be an entertaining and practical way to learn about networking from the perspective of our industry.

Prerequisites

Basic understanding of broadcast television concepts, basic grounding in IT.

Who should attend?

This course is designed for broadcast engineers and others who wish to understand the fundamentals of network technology and its role in the broadcast industry.

Learning outcomes

Delegates will:

1. Understand the basics of networking technology from the ground up.
2. Be able make comparisons with traditional broadcast communication and signal technology.

3. Learn about the most common networking hardware and software standards used in our industry.
4. Explore internetworking and understand the function of the TCP/IP suite of protocols.
5. Understand the different forms of packet switching utilised on modern networks and how they might be applied in broadcast.
6. Appreciate the advantages and disadvantages of utilising networking technology for individual broadcast applications.

All learning outcomes will be achieved using the information provided, case studies, practical demonstrations and labs.

Content

Network Fundamentals for Broadcast

- Established Broadcast Communication
- Networking Technology Principles
- Protocols and Network Models
- Evolution of Networks within Broadcast

Understanding LAN Communication

- LAN Technology Principles
- Ethernet LAN Technology
- LAN Forwarding Concepts

Wired Ethernet LAN Standard IEEE 802.3

- Legacy Variants
- Copper and Fiber Standards to 10 Gbit/s
- Copper and Fiber Development to 100 Gbit/s

Internetworking

- Internetworking Basics
- Internet Protocol Suite
- IP Addressing
- Internetwork Communication
- Transport Protocols
- Host Management

Broadcast Network Applications

- Higher Layer Protocols
- Streaming Technology
- Professional Signals over Networks
- The Future of Broadcast Networks