

Course ID
MPBN
Course Duration
5 days

Course Title
Mobile Packet Backbone Network (MPBN)

Related Courses

- GSM: Network Architecture, Operation, and Design (GSM-I, 5 days)
- UMTS-FDD: Network Architecture, Operation, and Design (UMTS-FDD, 2 days)
- ATM: A Survival Course (ATM, 3 days)
- IP-Based Systems: TCP/IP and Mobile IP (IPSYS, 2-3 days)
- Internetworking with TCP/IP Version 6 (IPV6, 2-3 days)
- SS7/C7 Protocols and System Operation (SS7C7, 3 days)

Aimed At

Telecommunications engineers who wish to prepare themselves for the transition to packet-switched backbone architecture.

Group Size

5-25

Prerequisites

While no specific courses are pre-required, you should have a general familiarity with GSM or UMTS architecture and services.

Course In a Nutshell

We will discuss a wide range of packet networking topics, while placing them into the context of mobile networks. Beginning with an overview of access networks and signaling, we will undertake an in-depth study of ATM, IP, Ethernet, transport layer protocols, and GSM/UMTS interfaces. We will conclude with a look at mobility management over MPBN. You will go away from the course with an understanding of the impact of IP and related technologies on the entire, end-to-end mobile communications network.

Customize It!

Customize this course to your specific needs at little-to-no additional cost. We offer distinct versions of this course tailored for audiences such as network engineers, equipment or application designers, or less technical audiences such as managers, executives, business planners, sales and marketing specialists, and operations and support personnel. The course can also be extended to include application layer protocols such as IMS and SIP if needed.

Course Outline

- Technology Overview: Access Networks
 - Roadmap to 4G
 - GSM/GPRS/EDGE
 - UMTS 3GPP releases
 - 3.9G release (LTE/SAE)
- Circuit Switched Technology: Signaling
 - SS7 overview
 - SS7 over ATM
 - SS7 over IP – SIGTRAN
 - The Transport network in Soft Switch Solutions
- ATM Technology
 - ATM technology overview
 - ATM networking
 - AAL1
 - AAL2
 - AAL5
 - IP over ATM
 - SDH/SONET
- IP: Internet Protocol
 - IPv4 packet format
 - IPv4 addressing
 - IPv4 routing
 - OSPF
 - IPv6
 - QoS in IP networks
 - MPLS solution
- Ethernet
 - Ethernet addressing
 - Ethernet QoS mapping
 - Gigabit Ethernet
- Transport Layer Protocols
 - Transmission Control Protocol - TCP
 - User Datagram Protocol - UDP
 - Stream Control Transmission Protocol
- GSM/UMTS Interfaces
 - Gb over IP
 - Iub over ATM

- Iub over IP
- Iur over ATM
- Iub over IP
- Iu over ATM
- Iu over IP
- Core network over ATM
- Core network over IP
- Mobility Management over MPBN
- Course Recap and Conclusions

How You Will Learn

- You will learn in interactive lecture format from an instructor with expertise in a wide range of IP and mobile communication technologies.
- Along with the lecture, we use exercises, puzzles, case studies, and interesting group activities to enrich the class and communicate the essential points.
- If you already know something about the technology, we will build on that base. We'll compare and contrast what's already familiar to you with what's new, making the new information easier to assimilate.
- If your background is less technical, we will use meaningful and interesting examples and analogies to simplify the complex subject matter.
- The participant handbooks will provide you with a structure to which you can add the information and insight provided in real-time, turning it into a valuable reference resource you can take back to your job.

Revised

Nov 20, 2009f