



AFRICAN ADVANCED LEVEL TELECOMMUNICATIONS INSTITUTE (AFRALTI)

WORKSHOP OUTLINE

- Title:** EMERGING NETWORKING TECHNOLOGIES (IPV6, VOIP, MPLS)
- Dates:** 16th – 20th August 2010
- Venue:** Maputo, Mozambique
- Cost:** Participants ex AFRALTI Member States - US\$ 1,000.00 per person
Participants ex Non Member States - US\$ 1,200.00 per person
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TARGET AUDIENCE:

This workshop targets staff in telecom operators (fixed and mobile), service providers, and regulatory authorities, financial institutions and any other organizations that have implemented, or are intending to implement enterprise level networking solutions.

In particular, it targets:

- Service Provider Engineers
- Service Provider Network Designers
- Network Engineers / Administrators
- IT Managers
- Graduates from Electrical/Electronic Engineering disciplines

DESCRIPTION:

The information and communications technology landscape is changing fast. Admittedly, new communications and networking technologies are always emerging. Technologies thought to be only experimental and with no clear future are now realities. While we talk of emerging technologies in areas such as Access, Cellular and 802 Wireless, this course looks at emerging IP technologies namely: Ipv6, Voice Over-Internet Protocol (VoIP) and Multi-protocol label switching (MPLS). At the center of

these technologies is the Internet, which is constantly changing the way applications are used. Participants will be able to understand how these technologies are revolutionizing the traditional telecommunications field as well as the impact on the current IP communications.

Besides giving the proper conceptual framework for these technologies, case studies, and practical demonstrations are given to assist students have a full grasp of the course.

WORKSHOP OBJECTIVES:

The workshop aims to assist participants to gain an in-depth understanding of emerging IP networking technologies and in particular, they will be able to:

- ✓ Articulate the new features in Ipv6
- ✓ Spearhead transition of Ipv4 systems to Ipv6
- ✓ Identify and explain VoIP protocols.
- ✓ Describe the routing of a voice signal in an IP network
- ✓ Describe the VoIP architectures and network components
- ✓ Describe some configuration aspects of a VoIP network using the SIP standard
- ✓ Explain what is afforded by MPLS to Service providers and end-users
- ✓ Identify the MPLS network components
- ✓ Explain the MPLS signaling protocols
- ✓ Explain MPLS Qos features
- ✓ Describe implementation of MPLS VPNs.

WORKSHOP TOPICS:

Ipv6

- Ipv4 and Its Shortcomings
- Ipv6 Header and Addressing
- ICMPv6
- Multicast Listener Discovery, Neighbour Discovery
- Address Autoconfiguration
- Ipv4/Ipv6 Transition /Co-existence

Voice Over IP

- Integration of Voice over IP and Challenges
- Business Case for VoIP
- Signal Processing
- Addressing Qos
- H.323 Architecture and Network Components
- MGCP and Megaco Protocols

- SIP Architecture and Network Consideration
- SIP Messages, Sessions, Call Flows
- Implementation and Applications

Multi-Protocol Label Switching

- MPLS Concepts
- Business case for MPLS
- MPLS Signaling
- Traffic Engineering – RSVP, CR-LDP
- MPLS VPNs
- MPLS Resiliency

Practical's

The course features practical's for technologies such as Ipv6 and MPLS

FACILITATOR BRIEF:

Mr. Mohamed Noorani is an international expert in telecommunications, data communications and networking and has been actively involved in the industry since 1981. He holds a Bachelors Degree in Electrical Engineering and is a licensed and registered Engineer in his home country, Kenya. He is also a Cisco Certified Network Associate and a Microsoft Certified Systems Engineer.

Mr. Noorani has taught telecommunications technology and data communications training seminars to wide acclaim across Africa since 1991, and has a broad experience working as an engineer in the telecommunications industry.

He worked for Kenya telecommunications as a Project Planning Engineer for ten years on projects including Digital Voice and Data Networks, on Signalling System No. 7, X 25 Packet Switching Network for the Kenya Data Network and many other projects in capacities ranging from detailed Project Design and Implementation to Project Leader.

Currently, Mr. Noorani is the Head of Network Planning and Management at the African Advanced Level Telecommunications Institute (AFRALTI) specialising in developing and conducting training programs in Broadband Wireless technologies, CCS No 7, VSAT Networks, Network Planning, Telecommunications Network Management, IP networks and Convergence, GSM Wireless Technologies such as CDMA and WiMAX, Circuit,

Packet and Ethernet switching, VoIP, Next Generation Networks and IP networking over Satellite.

Register Now!!

For more information, please contact us on :

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