Université Polytechnique HAUTS-DE-FRANCE

Computer Networks

ECTS
4 crédits

Composante
INSA Hauts-de-France, UPHF

Présentation

Description

Goal : To provide the key concepts in terms of network planning and interoperability for service provision in the Internet context.

List of subjects to be presented to the students :

Introduction to networking
Layered architectures. ISO/OSI Reference Model. TCP/IP architecture. Multiplexing techniques. Circuit and packet switching.
Data transmission
Encoding and framing techniques. Error control. Retransmission schemes. Sliding window flow control. Examples of data-link protocols.
Multiple access networks
Classification of MAC protocols. Random access schemes: ALOHA, Slotted-Aloha. Carrier Sensing Schemes: CSMA, CSMA-CD, CSMACA. Token passing schemes. Ethernet. Protocols for wireless local and personal area networks: IEEE 802.11, Bluetooth, IEEE 802.15.
Routing and mobility
Taxonomy of routing techniques. Routing algorithms: shortestpath routing, distance vector routing, link state routing. Mobility management issues.

Informations non contractuelles.
Dernière mise à jour le 13 février 2024