Advanced interconnection and long distance networks

ECTS
7 crédits

Hourly volume
103h

Introducing

Objectives

At the end of this module, the student will have understood and be able to explain the:
- network architectures and protocols used in operator networks. More precisely, those related to Quality of Service, IPv6, SNMP, inter-domain & intra-domain routing, MPLS and traffic engineering
- wide area data network services that are in use in business, namely VPN (Virtual Private Network) services (Layer 2 and IP) and Carrier Ethernet services
- basics of network optimization, network planning and traffic engineering as well as the accompanying models and algorithms
- main concepts and formalisms used for the description and verification of communication protocols.

The student will be able to:
- Apprehend and master the functioning of Internet core networks (that may conform to the DiffServ framework, with IPv6 and/or MPLS enabled portions, etc.) and manage them
- Design and deploy VPN services for business
- Manage network devices via SNMP
- Apply the appropriate algorithms to network planning and network optimization problems
- Apply formal modelling and verification techniques to communication protocols

Practical info

Location(s)

Toulouse