

Architectures, Components and Network Services (6+3 CFU)



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- Semester: Second
- Exam mode: Oral + Project
- Pre-requisites: Knowledge of the network layer (IP), Basic knowledge of Linux
- Area: GR-a (Networking)

Syllabus



Objectives

Description of the architecture and protocols of modern packet-switching networks and on-the-field understanding of networking in Linux

Topics

- IPv6 & MIPv6
- Multicast communications
- Transport layer
 - UDP
 - TCP (with detailed analysis of TCP congestion control)
- Quality of Service
 - Scheduling algorithms
 - Architectures: IntServ and DiffServ
- Application-layer network overlay: services and architecture
- Lab module (3 CFU), focused on networking in Linux

Thesis available

- QoS architectures and related issues
- Performance evaluation of queueing systems
- Rare event simulation
- Anomaly detection

