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

• Teacher(s) name: Michele Pagano
  • Email: michele.pagano@unipi.it
  • Phone: +39.050.2217575
  • Web page:

• 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