Projet Ingénierie de Réseaux

Component
École Nationale Supérieure d'Électrotechnique d'Électronique d'Informatique d'Hydraulique et des Télécommunications

In brief

Code: N8EN18D

Presentation

Objectives

Understand and observe the main mechanisms contributing to the implementation of quality of service in the Internet.

Description

First we address the issues related to the deployment of QoS by simulation. After a brief description of QoS architectures (IntServ, DiffServ) and QoS mechanisms: classification, measurement, smoothing, policing, scheduler, ... We study TCP congestion control mechanisms (Reno, New Reno, Tahoe) . We illustrate the most classic tools: Leaky / Token Bucket, Round Robin, Deficit Round Robin, FQ, WFQ, RED, We observe the performance of some of these mechanisms through simulations in the NS2 environment. Then we move on to setting up in a Linux / Cisco environment. The students are divided into three projects: IP level QoS, Ethernet level QoS and Load sharing (application, network and link level). The tools used: network configuration tools under linux and under Cisco. Use of hardware, software specific to networks.

Pre-requisites

Internet, Local Area Networks, Network performance