

USEEJ7 - Networks - Complements and Applications

Présentation

Prérequis

TELNET-USEEJ6 (Telecommunication Networks).

CSMV-USEEN1 (Computer Systems Modeling and Verification)

OSCA-USEEN2 (Operating Systems and Computer Architecture)

OR-USEEN3 (Operations Research)

Objectifs pédagogiques

Learn the main principles of performance evaluation techniques applied to computer networking

Programme

Contenu

Part I — Queueing Theory

Introduction

Basic concepts of probability

Discrete Random Variables

Continuous Random Variables

Expectation

Conditional distribution and expectation

Stochastic Process

Discrete-Time Markov Chains

Continuous-Time Markov Chains

Network of queues

Part II — Simulations

Random number generation

Generating Discrete random variables

Generating Continuous random variables

Discrete event simulation

Statistical Analysis of simulated data

Modalités de validation

- Projet(s)
- Examen final

Description des modalités de validation

Hands-on labs are organized to cover key parts of the teaching module and evaluated based on lab reports. The final exam is based on exercises covering the whole module.

Bibliographie

Titre	Auteur(s)
The art of computer systems performance and analysis	Raj Jain
Probability and Statistics with Reliability, Queueing, and Computer Science Applications	Kishor S. Trivedi
Computer networking: a top-down approach	James F. Kurose and Keith W. Ross

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Code : USEEJ7

Unité spécifique de type cours

6 crédits

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