INSA INSTITUT NATIONAL DES SCIENCES APPLIQUÉES LYON

DPT TELECOMMUNICATIONS SERVICES ET USAGES
TELECOMMUNICATIONS, SERVICES & USAGES
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# Réseaux & Services

## Content Delivery Network

### IDENTIFICATION

| | |
|---|---|
| CODE : | TC-5-S1-EC-CDN |
| ECTS : | 2.0 |

### HOURS

| | |
|---|---|
| Lectures : | 0.0 h |
| Seminars : | 32.0 h |
| Laboratory : | 0.0 h |
| Project : | 0.0 h |
| Teacher-student contact : | 32.0 h |
| Personal work : | 0.0 h |
| Total : | 32.0 h |

### ASSESSMENT METHOD

### TEACHING AIDS

### TEACHING LANGUAGE

English

### CONTACT

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## AIMS

OBJECTIVES:
A fast content delivery network is a highly distributed server platform optimized for delivering content, including web applications and streaming media content. This network of servers is distributed in different physical locations and points of the network to directly handle end-user requests for secure and fast web content and multimedia delivery. It serves as an intermediary between a content server, also called the origin server, and its end users, or clients. The objective of this course is to give the main concepts and tools to understand the importance of this type of network and architecture.

CAPACITIES:
- To understand the frameworks of the use of the massive diffusion of the video on internet
- Become aware of technical constraints through concrete applications.
- Discover CDN network architectures and associated protocols

## CONTENT

KNOWLEDGE :
This 32h module consists of several parts:

CDN: needs, market, strategy, peering BGP, CDN architectures, content distribution network
AnyCast BGP: Build AnyCast Network for Fast Content Delivery
DASH Caching: The streaming and massive dissemination of video on the internet and the principles of video caching, streaming protocols
NetFlix: network infrastructure and architecture, operating principles of services