



# **Data Replication: From Distributed to Cloud Systems**

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#### Abstract

Data replication is a well known technique that consists of storing multiple copies of data, called replicas, at multiple nodes. It aims to increase data availability, reduce the bandwidth consumption and achieve fault-tolerance. Data replication has been commonly used in: (i) database management systems (DBMS), (ii) parallel and distributed systems, (iii) mobile systems and (iv) large scale systems including P2P and data Grid systems. Most of the proposed replication strategies in such systems are difficult to adapt to Clouds. Indeed, they aim to obtain better system performance without achieving important Cloud provider goals such as: (i) providing a reliable Quality of Service (QoS) by satisfying the Service Level Agreement (SLA), a legal contract between a Cloud provider and its tenants, and (ii) a dynamic adjustment of cloud resources while the provider aims to maximize its profit through resource sharing.

## Programme de la journée

## 9H30 ó 11H :

Thématique et état de la recherche Exposé Travaux en cours

11H - 12H :

Plateforme utilisée (Outils, démo, ...) Proposition de sujets et problèmes ouverts

#### Bio

RiadMokadem is currently an Associate Professor in Computer Science at Paul Sabatier University, Toulouse, France, and a member of the IRIT laboratory. His main research interests are query optimization in large-scale distributed environments, data replication and database performance. DrMokadem has been a member of organization committees of several conferences, mainly DEXA'11 that was held in Toulouse. Recently, he was invited as a guest editor for a special issue on 'Elastic Data Management in Cloud Systems' in the International Journal on Computer Systems Science & Engineering (IJCSSE).