

the following topics are listed for your information:

1. Tasks scheduling in clouds

Cloud is a multi-tenant environment and tasks submitted by users are of various kinds. Different tasks may interfere with each other, harming performance. Therefore, it is important to devise efficient scheduling algorithms to achieve good resources utilization while guaranteeing tasks QoS.

2. Data storage in clouds

There are many kinds of storage in clouds (e.g., file storage, database storage, etc.) and usually multiple services are available for the same kind of storage. How to tune these facilities to achieve best performance while guaranteeing data reliability? Two teams can be devoted to the following sub-topics on the basis of existing distributed file systems and NoSQL/NewSQL systems:

2.1 File storage. Issues interested include: 1) efficient metadata management schemes; 2) support of high-concurrent data access; 3) large number of small files processing.

2.2 NoSQL/NewSQL storage. Issues interested include: 1) internal data layout and organization; 2) data indexing; 3) query processing.

3. Desktop and application virtualization

Analyze and compare the protocols and mechanisms used in current VDI solutions; investigate how to remotely manipulate applications with graphic user interface in the same way like a desktop; how to implement efficient images compression and transfer for interactive applications like games.