Predictable Data Centers

Thomas Karagiannis, Microsoft Research

The Predictable Data Centers project tackles the issue of unpredictable application performance in today’s public and private data centers.

A key contributor to such unpredictability is shared resources like network and storage. The bandwidth for a Virtual Machine (VM), when communicating with other VMs or with shared services can vary significantly; recent studies have observed variability up to a factor of five. In the talk, I will discuss a number of scenarios that highlight how such unpredictability hurts application performance and tenant cost, and describe our first steps towards a predictable data center.