Cloud Computing meets Game Theory: a malicious RaaS guest agent

Description:
In future clouds, resources such as bandwidth, CPU and RAM are likely to change hands every second using auctions [1]. Auctions are the main selling mechanism in electronic markets such as eBay and Google AdWords. Intuitively, auctions can be regarded as a general tool for modeling resource allocation problems among strategic clients. To this end, each client has an agent, a piece of software that gets guidelines from the client and works on its behalf. The current agent only collects data passively about its surroundings, in a RaaS machine that auctions memory.[2]

In this project, the student will improve the current agent's capabilities for passive data gathering, gather data actively, and utilize it to improve its profits and/or hurt other guests' profits. The student will prove her/his work by throwing the new agents into a battle of performance, and may the best agent win!

Prerequisites:
Operating systems course (or equivalent knowledge). Python.

Advisors: Assaf Schuster, Orna Agmon Ben-Yehuda {assaf,ladypine} at cs.technon.ac.il

Number of students: at least 2 students.

References: