MSc thesis defense presentation

<u>Μυρτ■ Γαλενιανο■ defends her MSc thesis.</u>

Date:	Παρασκευ■, 28 Ιο■λ 2017
■ρα:	13:00
Location:	Σχολ■ Ηλεκτρολ■γων Μηχανικ■ν και Μηχανικ■ν Υπολογιστ■ν, ΕΜΠ (παλαι■ κτ■ρια), 1.1.31
Thesis title:	Federated Consensus Protocols
Committee:	• Δημ■τρης Φωτ■κης • ■γγελος Κιαγι■ς • Αριστε■δης Παγουρτζ■ς

<u>Thesis abstract</u>

This dissertation studies consensus protocols and specifically Raft and the Stellar Consensus protocol. We first define the execution model under which we study the protocols as well as the notion of a robust transaction ledger that we want the protocols to maintain and its properties. We proceed by presenting Raft as concrete algorithm and we prove that indeed Raft maintains a robust transaction ledger. We then move to the Stellar Consensus protocol and analyse federated voting, Stellar's mean to reach consensus. Subsequently, we present the two protocols that constitute the Stellar Consensus protocol, the Nomination and Ballot protocol, as concrete algorithms and further explore their properties. Finally, we show that the Ballot protocol has both persistence and liveness, the two necessary properties a protocol need to have to maintain a robust transaction ledger.

Download date: **2024-04-19, 16:40**.