A Mobile Edge Computing-Based Applications Execution Framework for Internet of Vehicles

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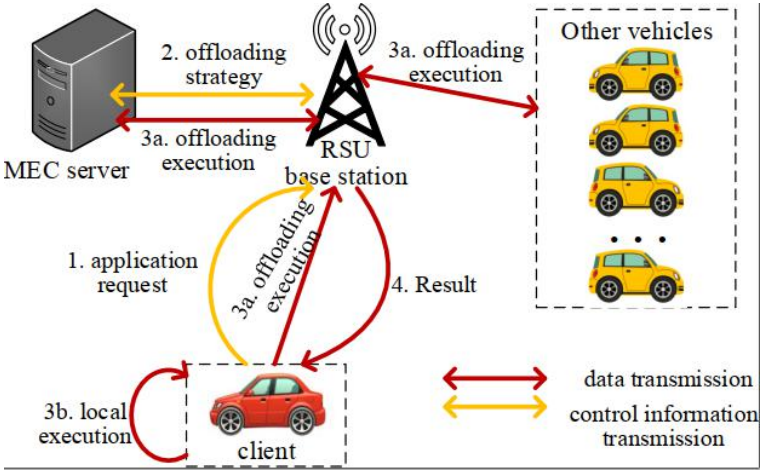
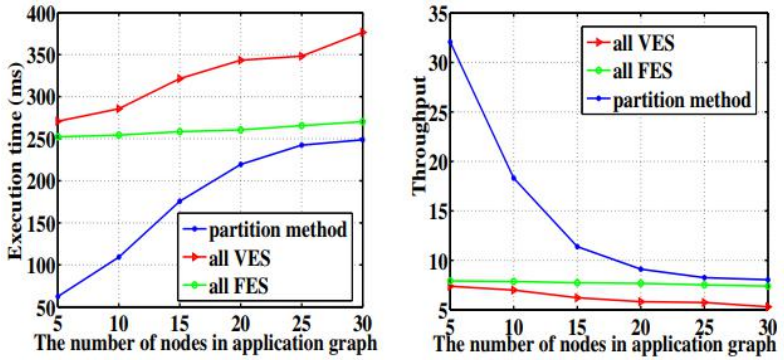
Problems & Ideas

- Problems of Application Execution Scheme for Internet of Vehicles
  - Few articles in the recent literature examining cloud-based MEC vehicle networking.
  - Existing studies focus on device-centric offloading methods, while application-centric offloading methods are rarely considered.
- Ideas: Application Execution Framework
  - Each application is partitioned and modelled as a directed acyclic graph (DAG)
  - Considering delay constraints
  - Both vehicles and MEC server can be used as candidate offloading nodes.



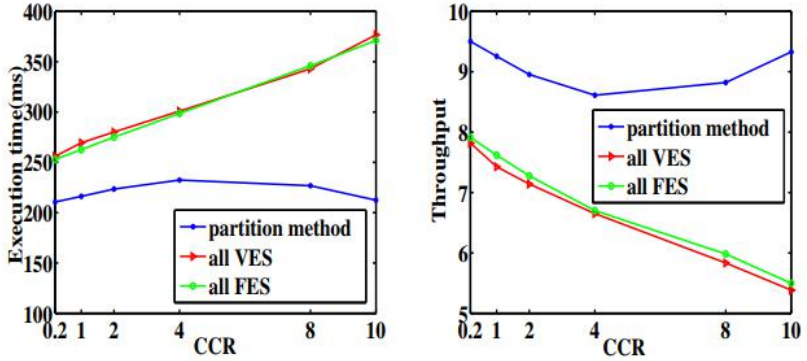
Main Contributions

- **Impact of the Number of Nodes on Performance**



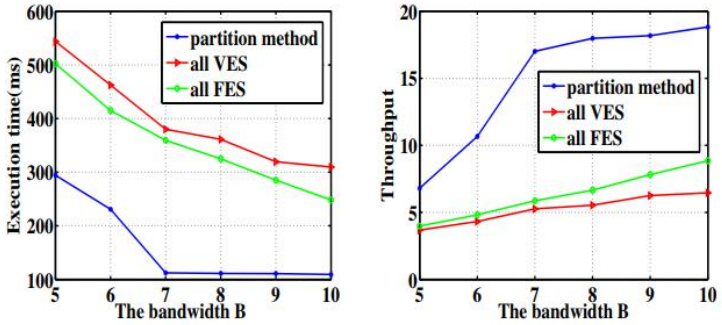
(a) Execution time - N (b) Throughput - N

- **Impact of CCR values on Performance**



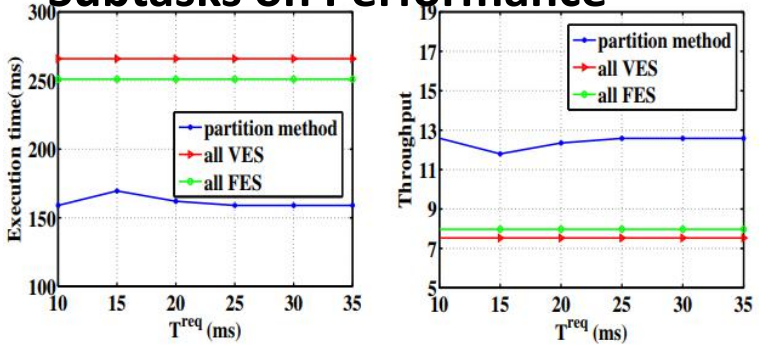
(a) Execution time - CCR (b) Throughput - CCR

- **Impact of Bandwidth Size on Performance**



(a) Execution time - B (b) Throughput - B

- **Impact of Delay Constraints of Subtasks on Performance**



(a) Execution time - T^{req} (b) Throughput - T^{req}