



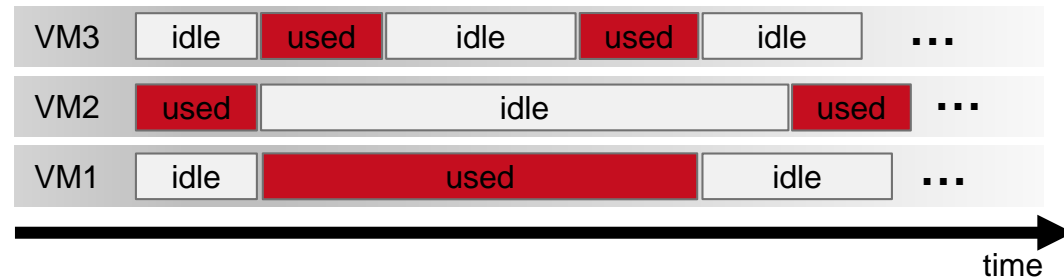
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Towards Auction-Based Function Placement in Serverless Fog Platforms

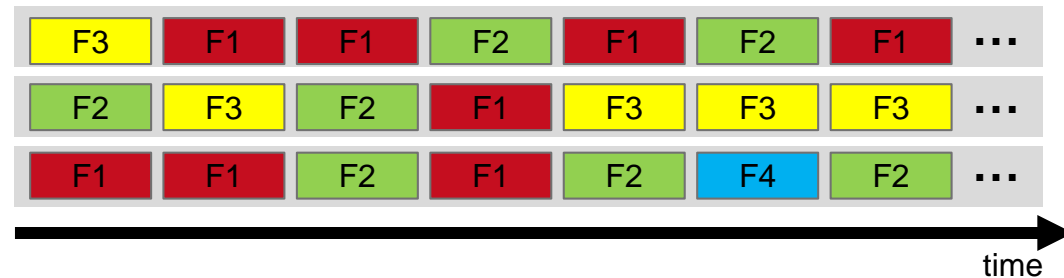
David Bermbach, Setareh Maghsudi, Jonathan Hasenburg, Tobias Pfandzelter

Serverless FaaS is very promising for the edge

VMs or
containers

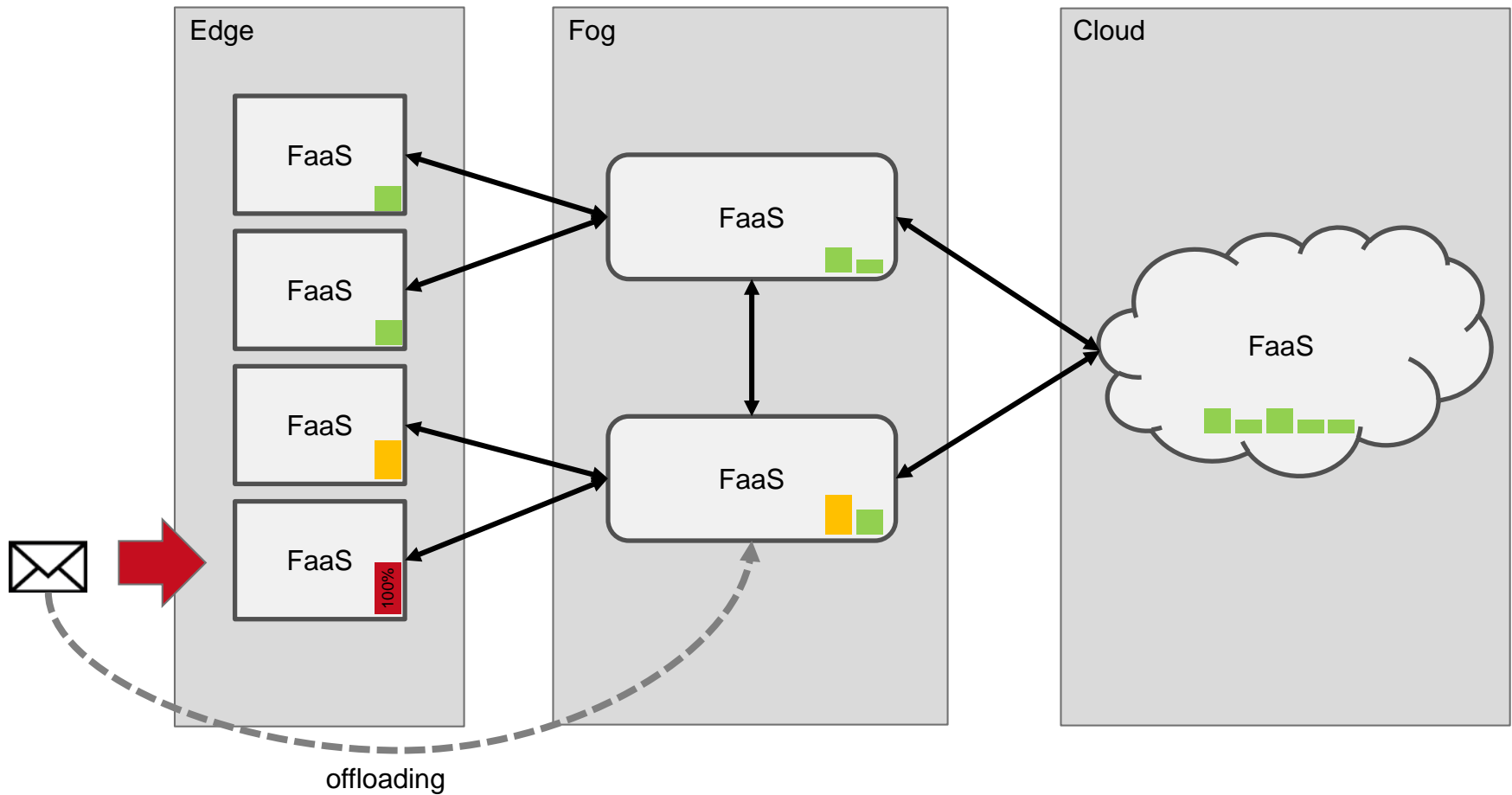


FaaS



Higher utilization of scarce edge resources

What happens when an edge node is overloaded?



How to pick a request for offloading?

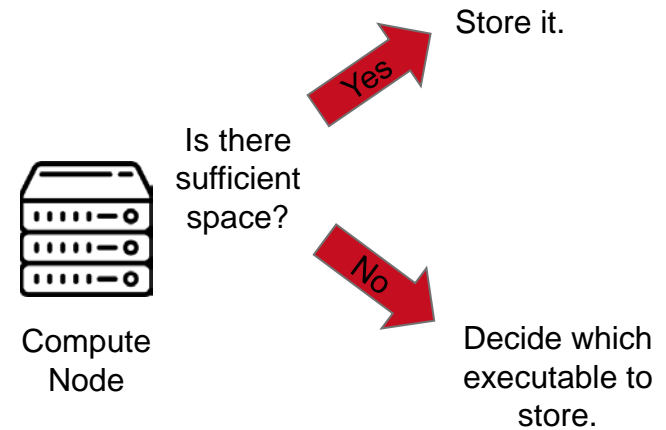
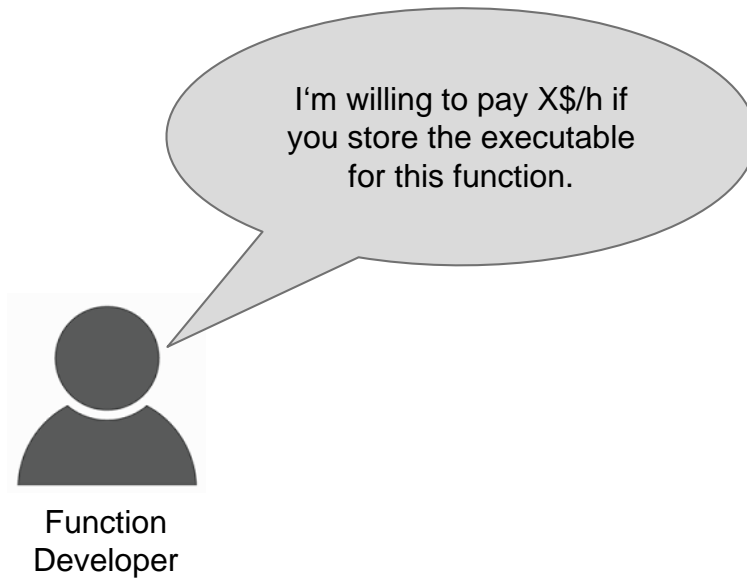
Idea:

- Let application developers bid on resources during deployment.
- When resources run low, nodes offload the request with the lowest bid.

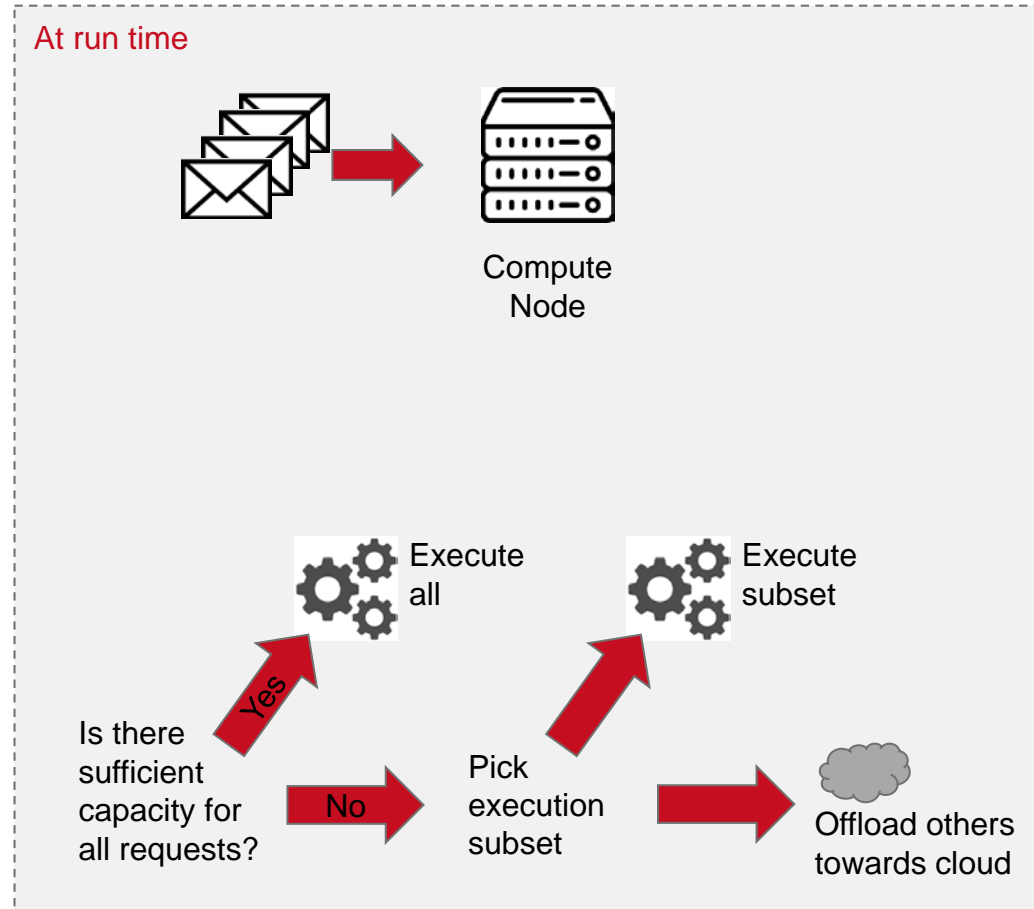
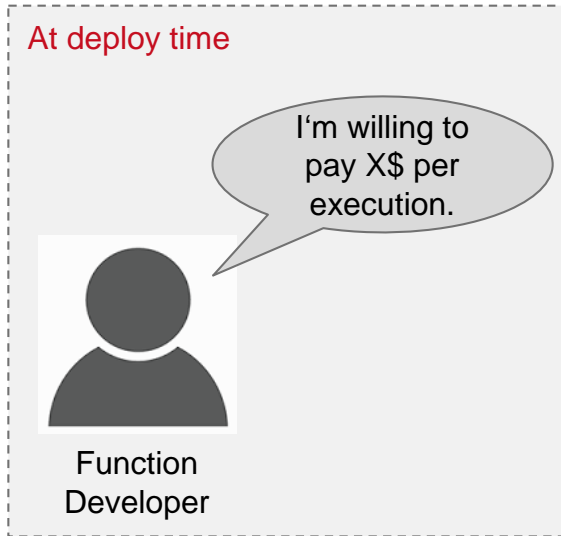
Benefits:

- Decision is entirely local (=> it scales!)
- Easy to implement
- Maximizes profits for edge nodes
- Efficient resource allocation
- Separate bids for storage and execution provides fine-grained control

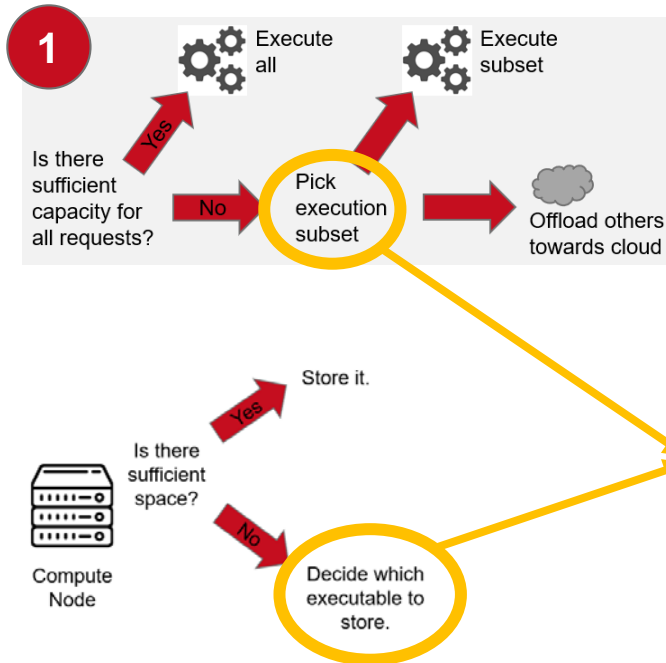
Bidding on storage



Bidding on execution capacity



In the paper: More details and...



2 Simulation-based evaluation

- Discussion of basic strategy
- Call for further research

Question?



Paper:



Auction-Based Function Placement in Fog-based FaaS

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