CSE3000 Weekly Progress Presentation

WEEK 4

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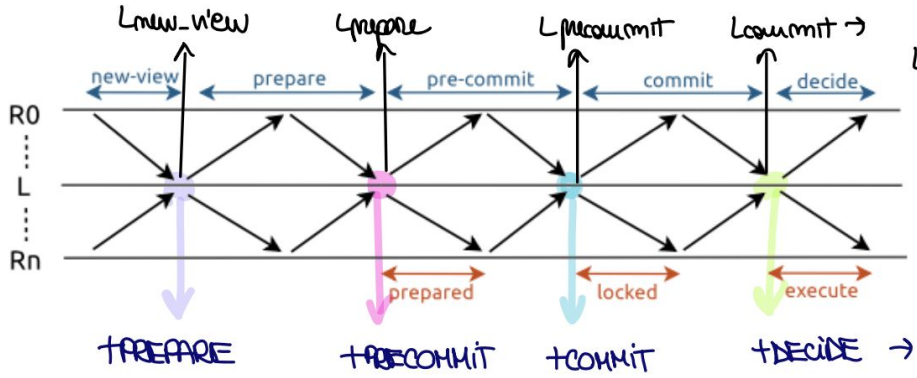
What have I done so far?

Progress on Hotstuff



Lx → latency vector obtained by leader where Lx[i] → time registered by leader when receives message of type x from replica i.

Lnew_view Lprepare Lprecommit Lcommit →

tPREPARE tPRECOMMIT tCOMMIT tDECIDE → times of quorum formation

⇒ t(nextX) = firstQuorum(Lx)

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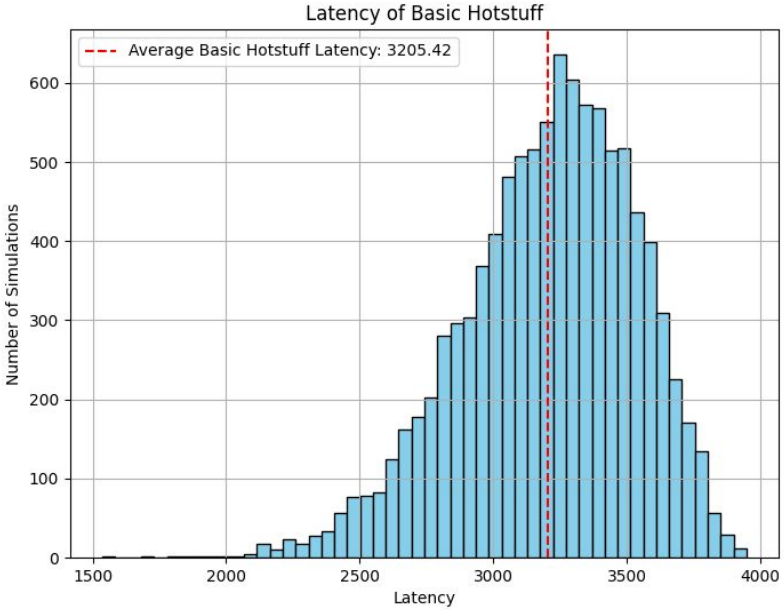
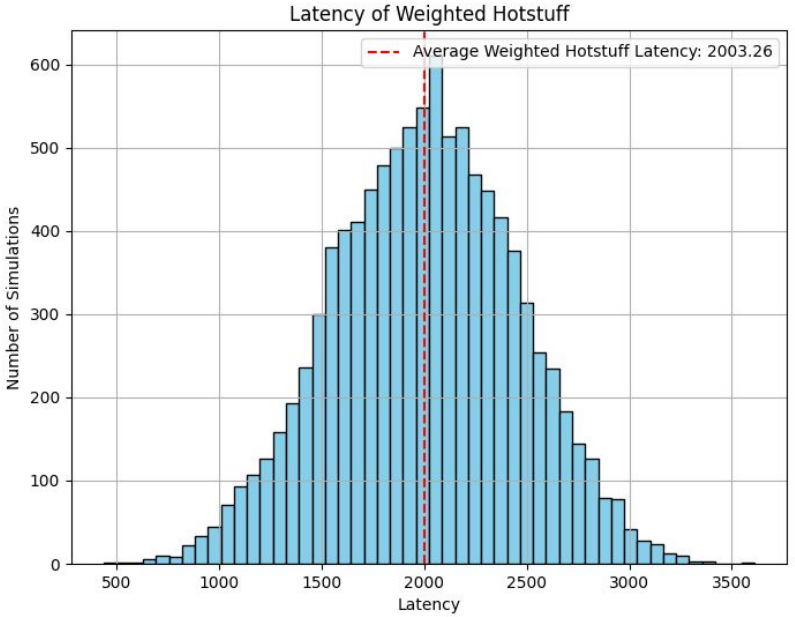
priority queue on Lx to get the fastest replicas

FINAL TIME OF ONE VIEW → (tPREPARE + tPRECOMMIT + tCOMMIT + tDECIDE)

Progress on Hotstuff





Progress on Hotstuff

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------------ EXPERIMENT 4 ------------
Basic Hotstuff yields latency of 2685.
Weighted Hotstuff yields latency of 1734.
The performance of the simulated annealing weighted assignment for the given network setup:

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-------- Simulated annealing
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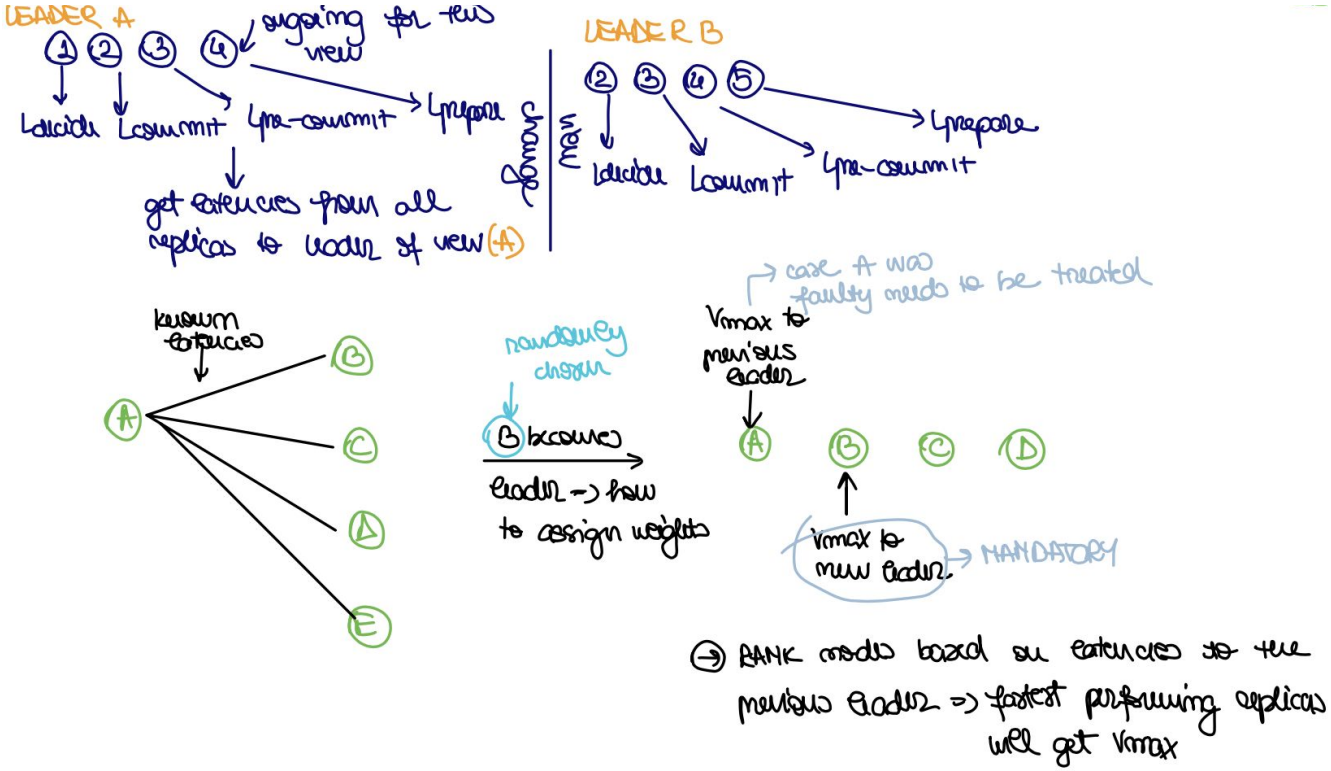
Configurations examined: 1160    time needed:0.013400077819824219
Final solution latency: 916
Best Configuration:  R_max: [0, 4], weight: 2.0 | R_min: [1, 2, 3], weight: 1 with leader 0
initTemp:120 finalTemp:0.19986405762345374
coolingRate:0.0055 threshold:0.2 jumps:75
```

Progress on Chained Hotstuff



Progress on Chained Hotstuff

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We perform Chained Hotstuff using 10000 simulations of the protocol, using 10 views.
Average latency of Basic Chained Hotstuff: 13575.050500000003
Average latency of Weighted Chained Hotstuff - randomly assigned weights: 6778.426199999996
Average latency of Weighted Chained Hotstuff - dynamically assigned weights: 6797.540999999979
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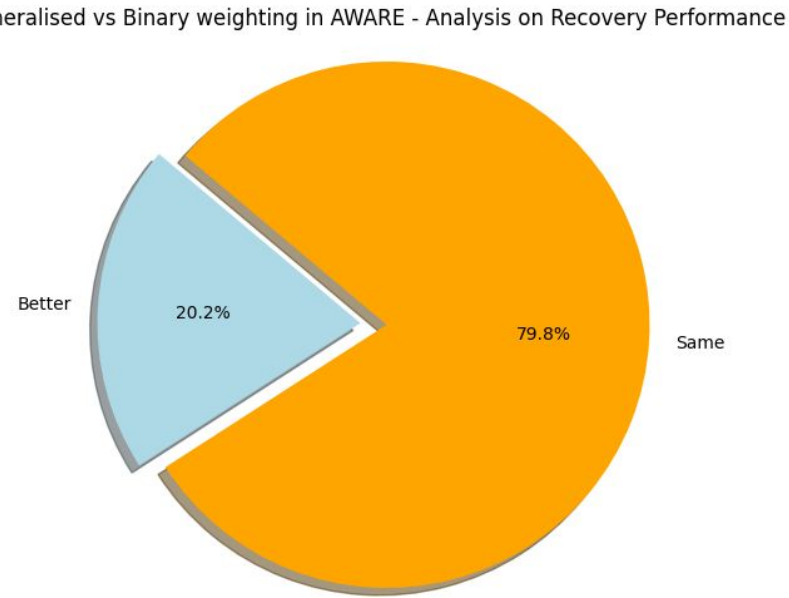
Progress on Generalised Weighted Voting on AWARE



What is next?

Goals for the week onwards

1. Finalised draft of **Contribution** section.
2. Weighted voting limitation exploration.
3. Hotstuff and Chained Hotstuff experiments.
4. **Midterm presentation.**

My Questions