TP2 - Contention Window

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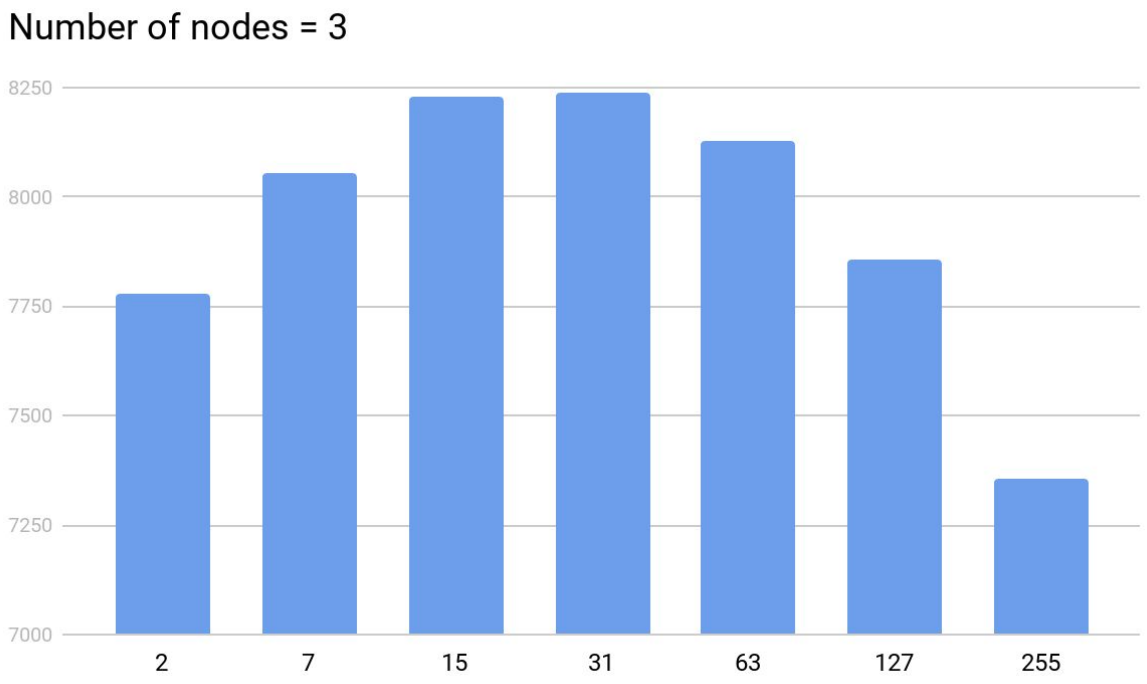
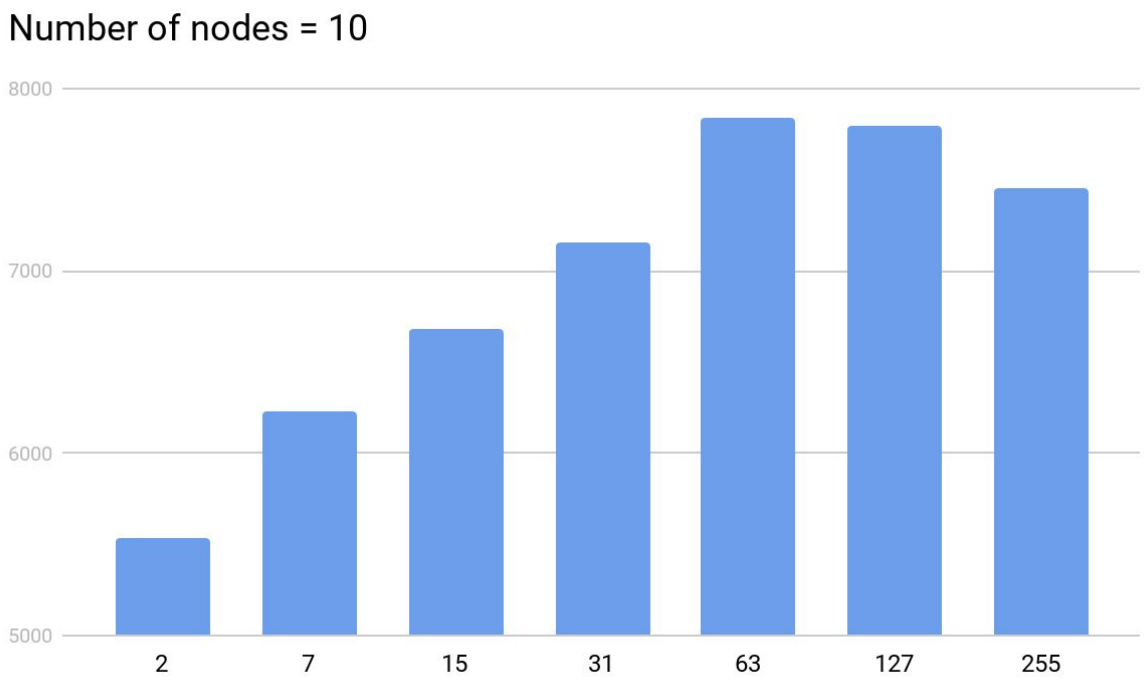
Simulation for 3 nodes

CW	2	7	15	31	63	127	255
Packets received	7780	8055	8231	8239	8129	7856	7358



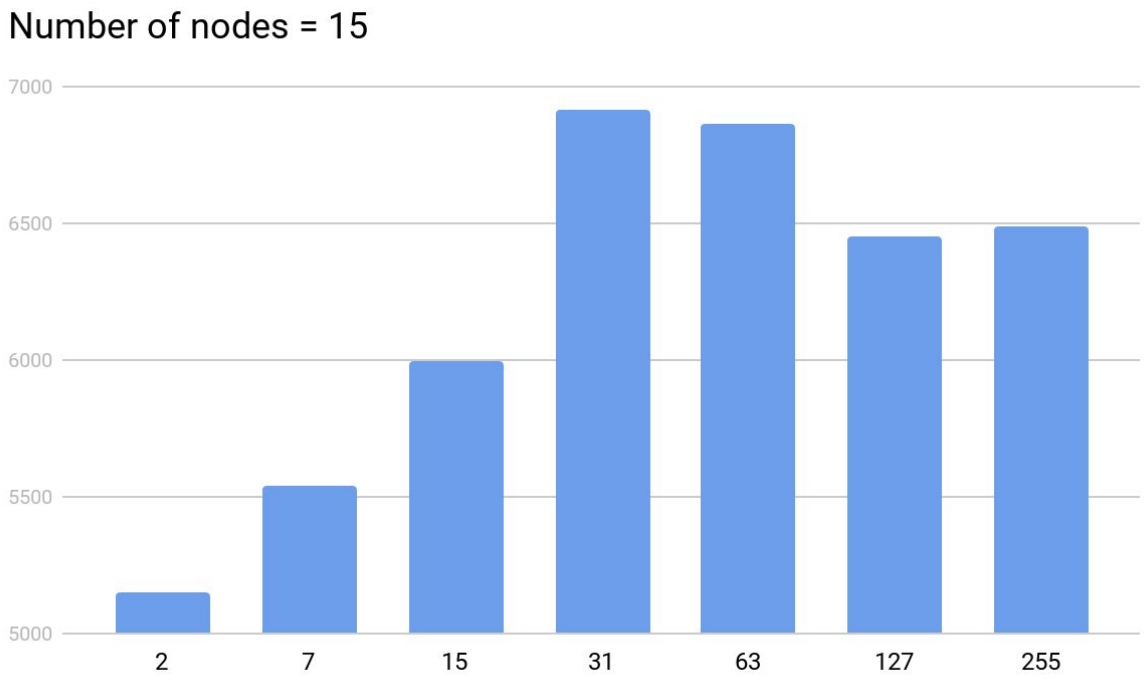
Simulation for 10 nodes

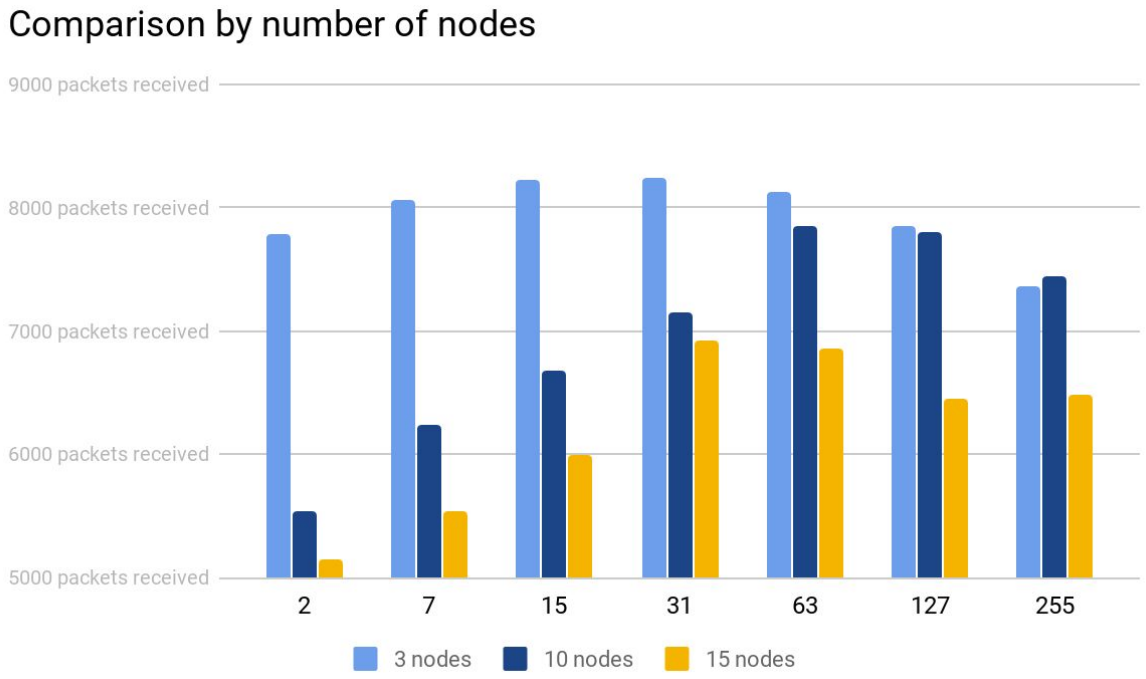
CW	2	7	15	31	63	127	255
Packets received	5532	6231	6679	7157	7844	7798	7451



Simulation for 15 nodes

CW	2	7	15	31	63	127	255
Packets received	5151	5540	5999	6915	6865	6452	6490





Experiment Analysis

What trends do you observe? Do you observe any optimal CW size for each network population?
The trends that can be observed is that there are less received packets when a CW is too low or too high.
I observe an optimal CW size for each network populations:

- Best CW size = 31 when there are 3 nodes
- Best CW size = 63 when there are 10 nodes
- Best CW size = 31 when there are 15 nodes

Can you predict what would happen if you tried to run with larger topologies?
If we tried to run with larger topologies, the number of packets received will decrease and the optimal CW size will increase to avoid collisions.