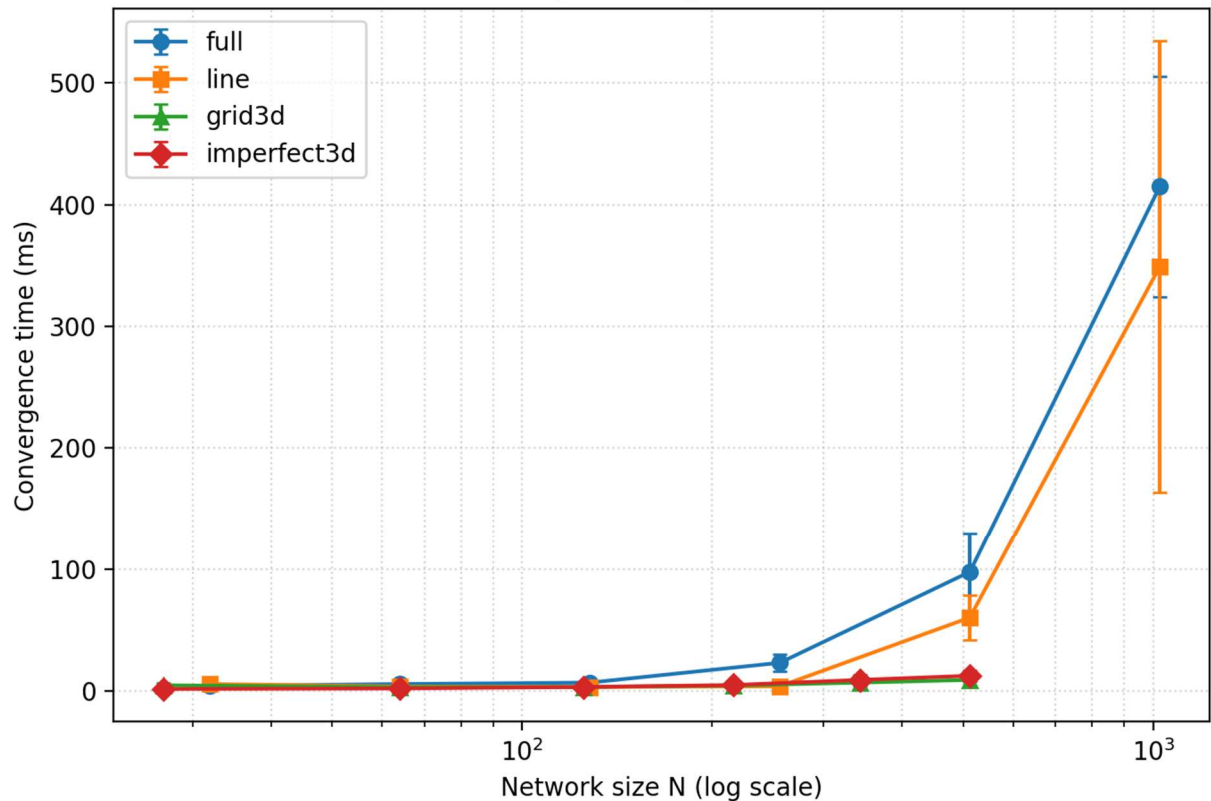
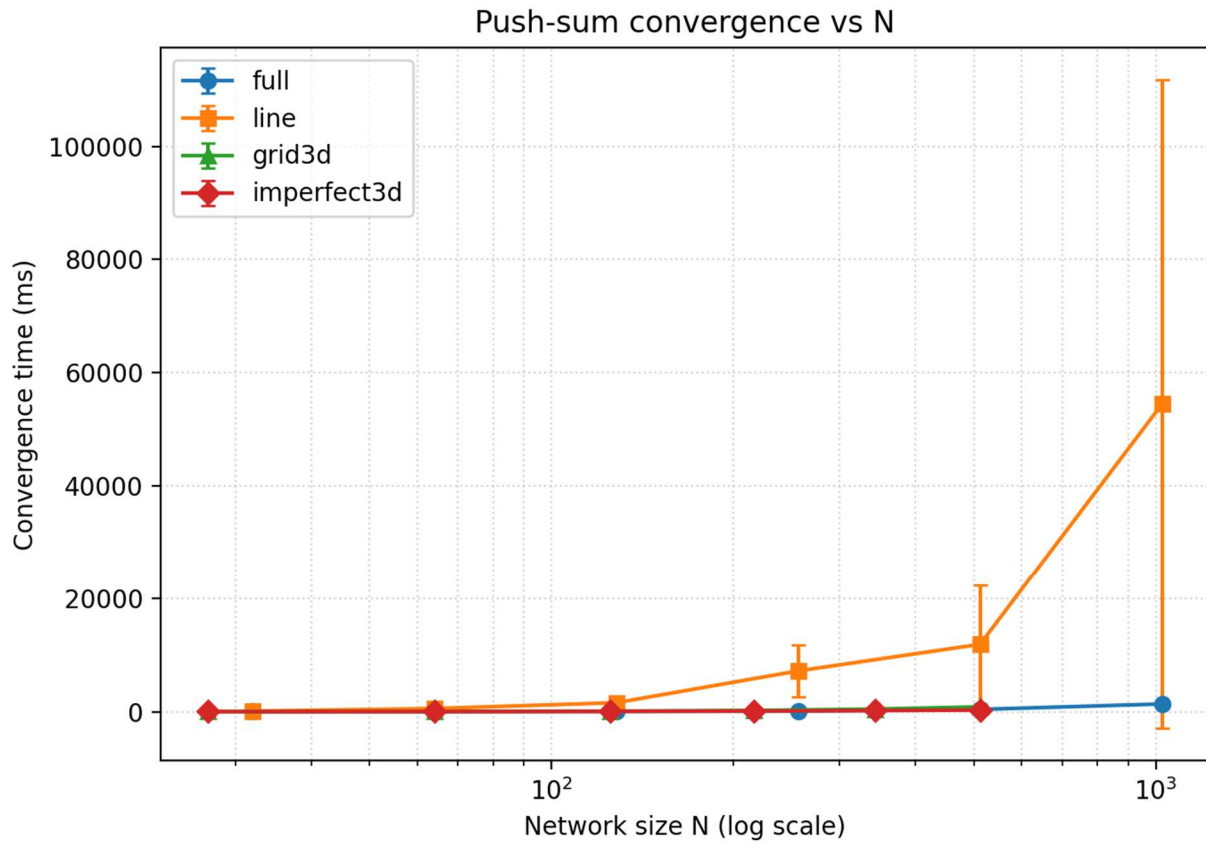


Gossip convergence vs N





**Findings:** In our gossip protocol implementation, surprisingly, the fully connected topology had the highest convergence, even over the line topology. However, the 3d grid and imperfect 3d grid topologies failed past a threshold of numNodes that both full and line topologies were able to persevere through. This is surprising, as the fully connected topology is able to disseminate messages much faster than the line network. However, this might be due to the fact the fully connected topology involves much more concurrent message-passing and processing compared to the line topology. For push-sum, though, the line topology has a much higher convergence than the fully connected topology (which is highly efficient for this algorithm), something that was consistent with our expectations of the results. The 3d grid and imperfect 3d grid topologies are both very efficient in convergence but have a lower limit of the maximum number of nodes they can handle compared to the fully connected and line topologies.