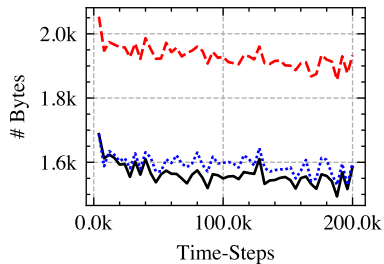


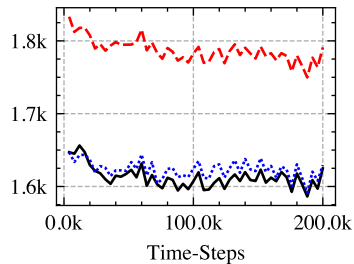
Unweighted Total Communication Cost

— Federated - - - Centralized Decentralized

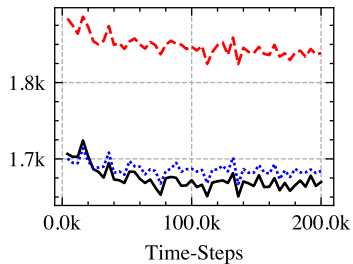
Grid-3x3 (Ranked)



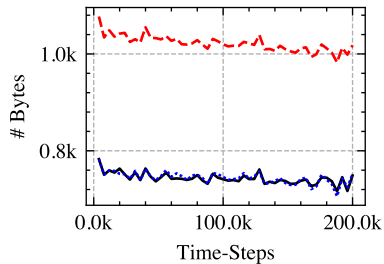
Grid-5x5 (Ranked)



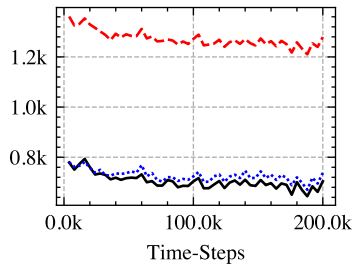
grid-7x7 (Ranked)



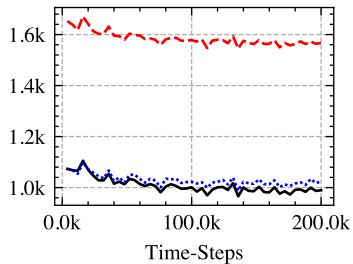
Grid-3x3 (Unranked)



Grid-5x5 (Unranked)



grid-7x7 (Unranked)



(a)

(b)

(c)