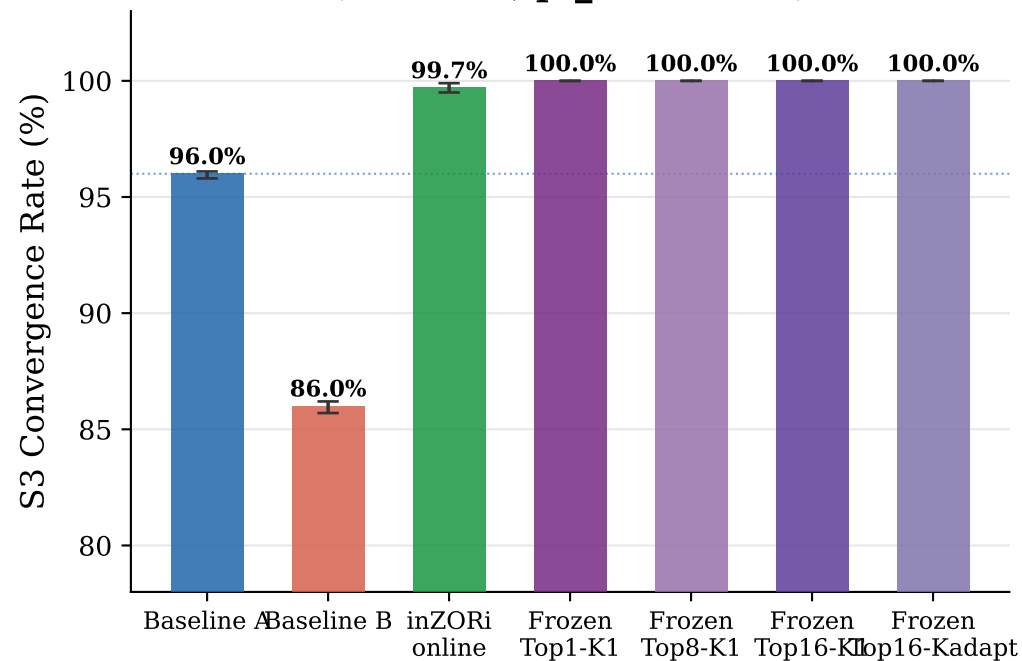


# Frozen-Elites Runtime vs. Online Strategies (118-bus, severe\_plus + N-1)

**(a) S3 Convergence**  
(20 seeds, pf\_interval=1)



**(b) Runtime Throughput**  
(lower K = more efficient)

