

Figure 1 is a log-linear plot showing the number of iterations required for convergence versus the number of nodes (n) for three different network topologies: star, ring, and bus. The y-axis is logarithmic, ranging from 10^3 to 10^4 . The x-axis is linear, ranging from 0 to 100. The star topology (blue line) shows the highest number of iterations, increasing from approximately 2.5×10^3 to 4×10^3 . The ring topology (green line) shows intermediate performance, increasing from approximately 1.5×10^3 to 2×10^3 . The bus topology (red line) shows the lowest number of iterations, increasing from approximately 1.2×10^3 to 1.5×10^3 . All three topologies show a similar trend of increasing iterations with increasing n . Shaded gray regions around the lines indicate confidence intervals.