

## PSP\_Lab\_Session\_4

**Overview of performance chart of different power flow algorithm based on time required to reach the convergence threshold.**

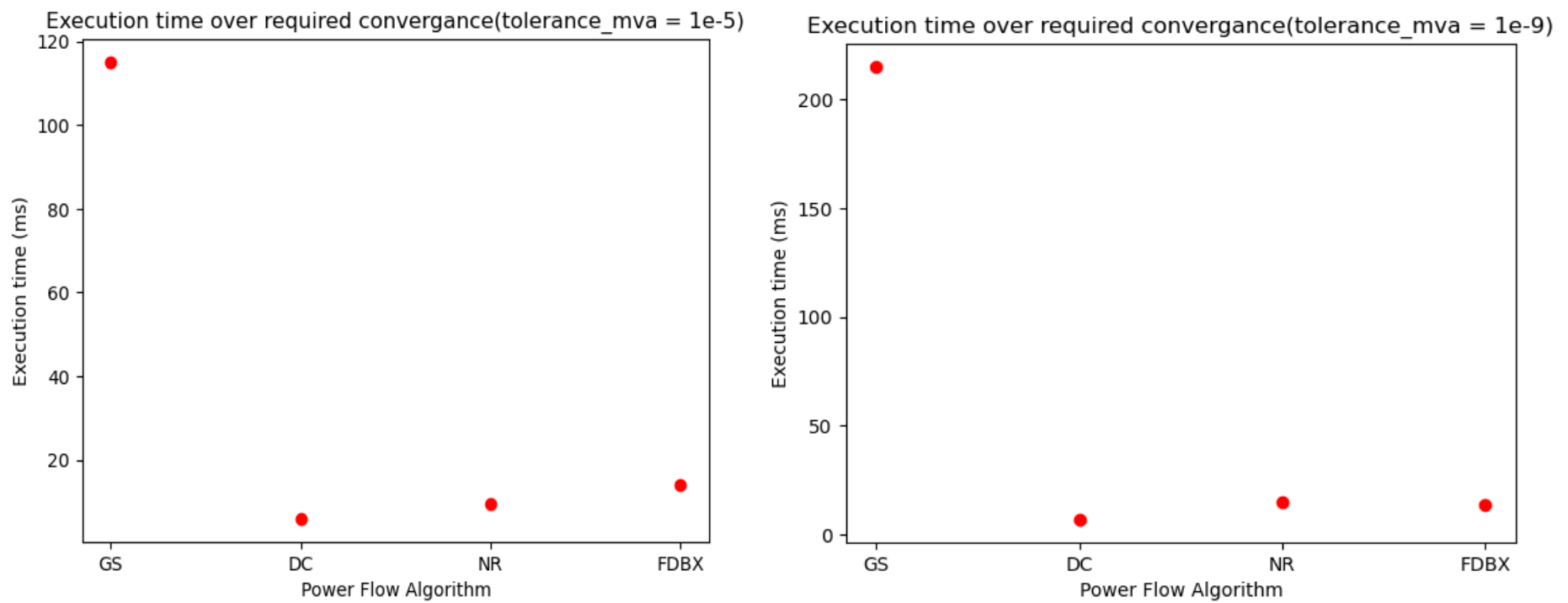


Figure 1: Execution time for different convergence threshold

- For the Gauss-Seidel algorithm there is a significant change execution time. With the decrease of convergence threshold from  $1e-5$  to  $1e-9$  the execution time increases from around 120 ms to 220 ms. For the other algorithm there is not that much notable change in execution time.

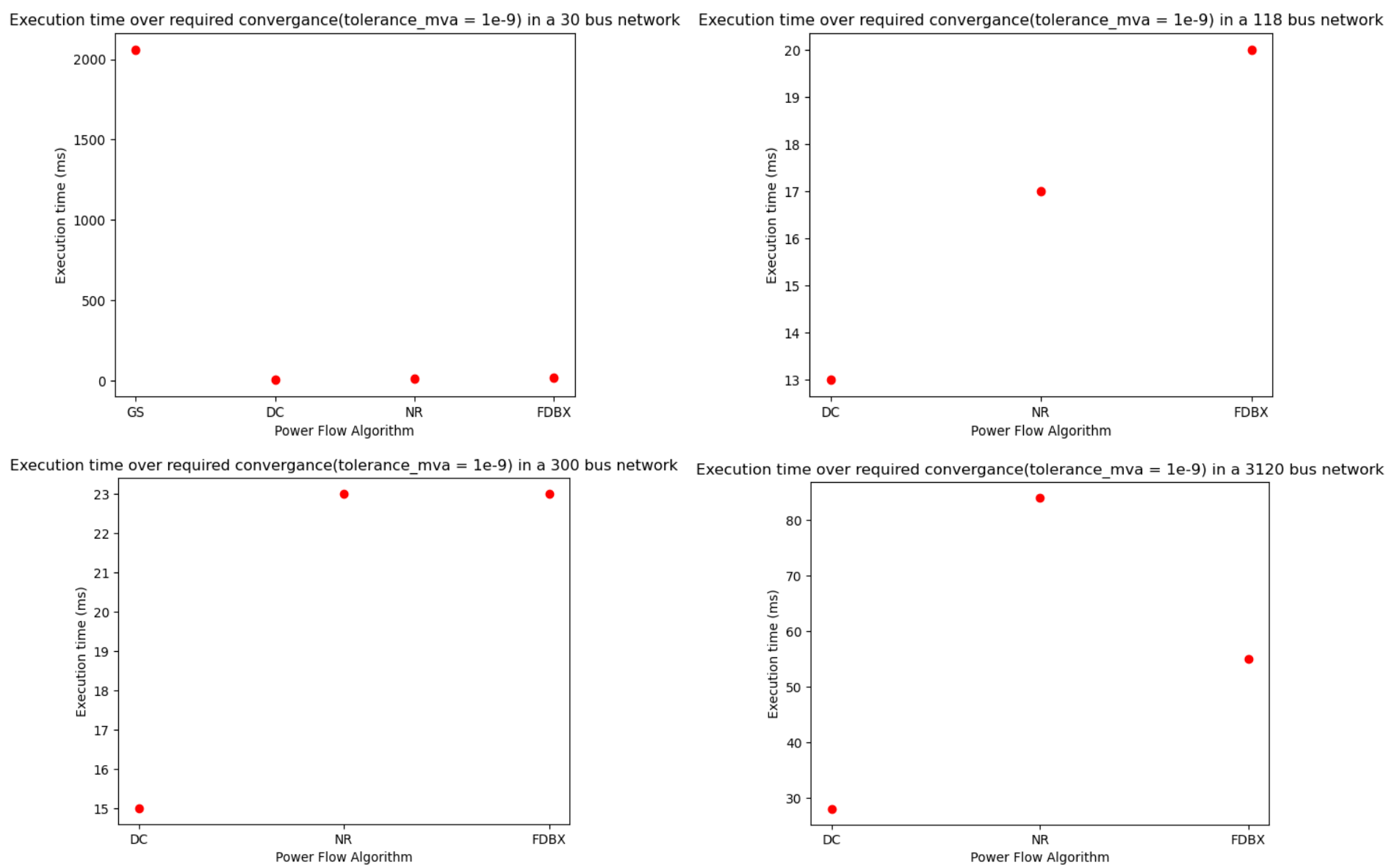


Figure 2: Performance chart with larger network

- With larger network there is not much drastic change in DC power flow algorithm execution time as shown in the above charts. But other algorithms have a good amount of rise in execution time which is shown the charts.