

A comparative study of queuing systems with variant of activation times and impatience under N policy

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In this paper, we consider M/M/1 queues under N policy with impatience of customers and different server activation strategies. Arrival process is Poisson and Service time and activation times are exponentially distributed which are all mutually independent. We obtain stationary distribution of the queuing process using the Matrix geometric method. Using these distributions we calculate performance measures of the respective systems. We also analyse these models numerically in order to have a comparison of the performance measures associated with them. Finally, we explore the optimal value of N numerically and a comparative study of these models is presented.

Keywords: N policy, activation time, impatience, matrix geometric method, optimization

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