

**Single Server, Bulk Arrival, Bernoulli Feedback Queue
with Vacations — Some Performance Measures**

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Abstract

This paper deals with M/G/1, bulk arrival queues with sever vacations and feedback facility. A customer after getting a service, if requires another service, is taken immediately for the next service and this can be repeated any number of times. The server leaves for a vacation as soon as the system becomes empty and returns after a vacation of random duration. Both single and multiple vacation policies are considered. A queueing model for such a system is formulated using LST. Its steady state system length and waiting times are studied for different distribution of the size of the arriving groups and the results analysed.

Keywords: Bulk Arrival, Compound Poisson, Single-Multiple Server Vacation, Departure and Feed Back Probability.