

### Performance indices of three tier application

A three tier application serves a Poisson stream of requests, at rate  $\lambda = 10 \text{ jobs/s}$ . The three tiers are respectively: a web server (demand  $D_1 = 85 \text{ ms}$ ), a DB server (demand  $D_2 = 75 \text{ ms}$ ), and a storage server (demand  $D_3 = 50 \text{ ms}$ )

Compute:

1. The utilization of the three stations
2. The average number of jobs in the three stations
3. The average system response time