

## Performance and Availability Analysis of 2N Redundancy Models

**Authors :** Yutae Lee

**Abstract :** In this paper, we consider the performance and availability of a redundancy model. The redundancy model is a form of resilience that ensures service availability in the event of component failure. This paper considers a 2N redundancy model. In the model there are at most one active service unit and at most one standby service unit. The active one is providing the service while the standby is prepared to take over the active role when the active fails. We design our analysis model using Stochastic Reward Nets, and then evaluate the performance and availability of 2N redundancy model using Stochastic Petri Net Package (SPNP).

**Keywords :** availability, performance, stochastic reward net, 2N redundancy

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