

Topics for Fault-Tolerant Computing Comprehensive Exam

Posted: xx

- Definitions. Goals (e.g., reliability, availability). Applications of FT computing. Faults, errors, and failures. Causes. Characteristics. Fault avoidance, masking, tolerance.
- Reliability, MTTF, CDF calculation for Canonical Structures such as Series, Parallel, None-series/Parallel, M-of-N System, Voters, etc
- Poisson Process, Markov Models, Markov Chain
- Byzantine Failures
- Information Redundancy
- Fault tolerant networks: multistage networks, crossbar, mesh, hypercube, star, loop
- Case studies