

# DIT636 / DAT560 - Reliability Measurement Activity

Reliability Measurements:

- Time Available: (uptime) / (total time observed)
- POFOD: (# failures) / (# requests)
- ROCOF: (# failures) / (period of time)
- MTBF: Average time between failures

We are developing an online shopping platform, and are interested in assessing its reliability.

We have observed the system for one day, and have recorded the following data:

- There were 1200 requests.
- 60 of those requests resulted in failures.
  - 56 failures resulted in incorrect computations.
  - 4 failures resulted in crashes.
- We can visualize the uptime and downtime (caused by crashes) as follows, where green represents uptime and red represents downtime.



Crash 1 (4:00): Down for 60 minutes

Crash 2 (8:00): Down for 15 minutes

Crash 3 (10:00): Down for 30 minutes

Crash 4 (16:00): Down for 60 minutes

**Answer the following questions:**

1. **What is the Time Available?**
2. **What is the POFOD?**
3. **What is the ROCOF in “failures per hour”?**
4. **What is the MTBF, if we only count crashes?**
5. **If we were interested in assessing availability with regard to a certain type of failure, what are some ways that we could do so? What additional data would we need?**