

Towards a Performance Model for Virtualised Multi-Tier Storage Systems

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This work contributes towards:

iPODS: Intelligent Performance Optimisation of Virtualised Data Storage Systems

Project Objective:
Strategies for Data Placement and Data Migration

Project Partners:

Sponsored by

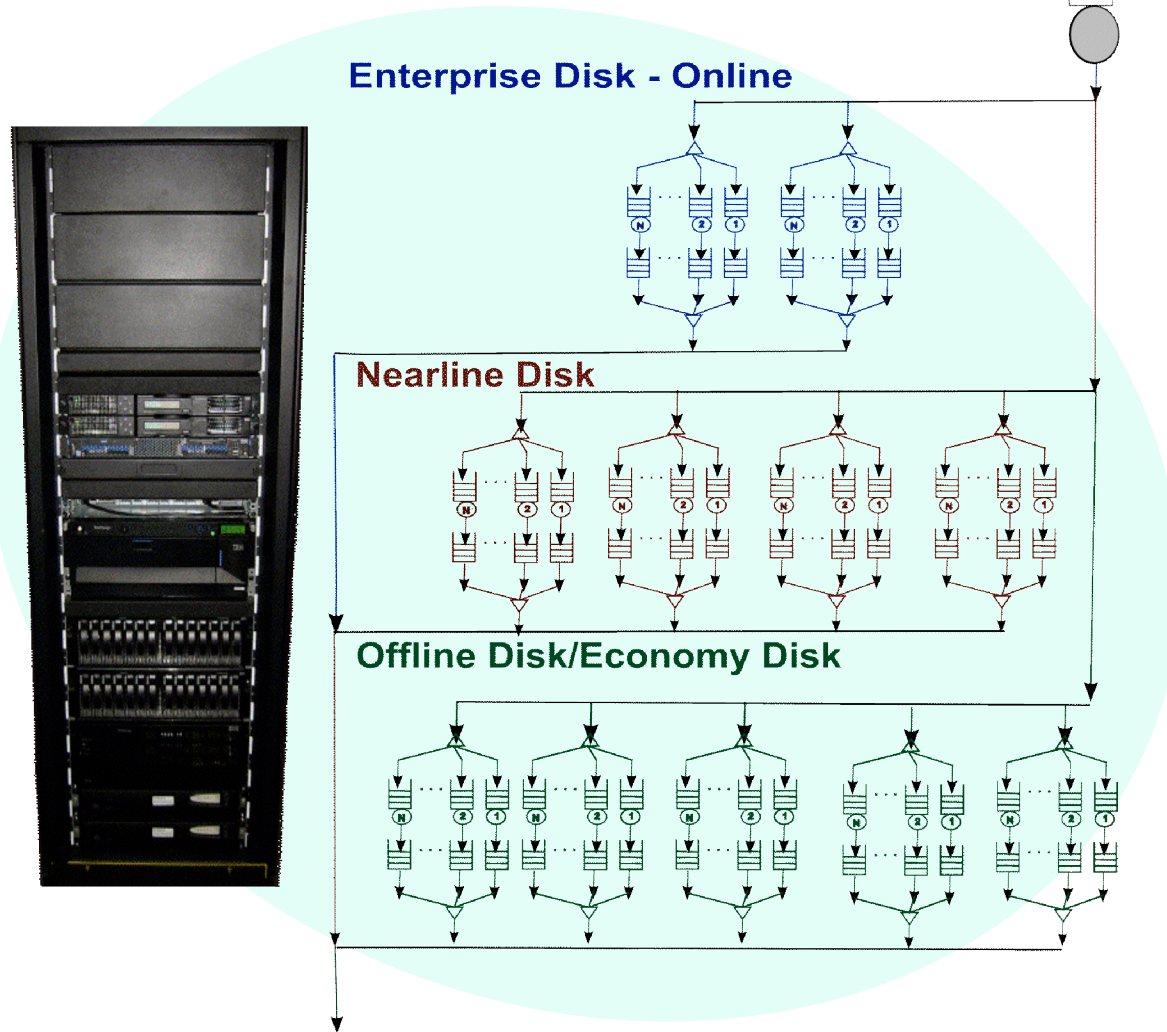


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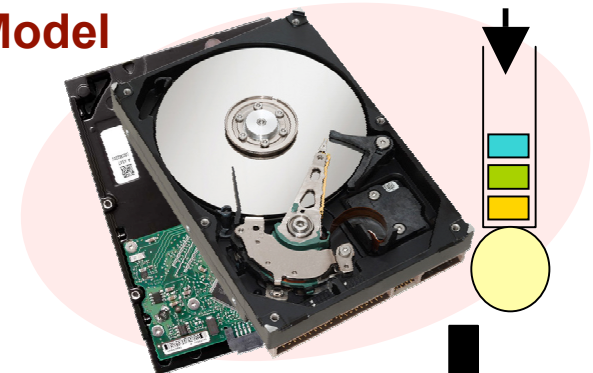


Project Overview

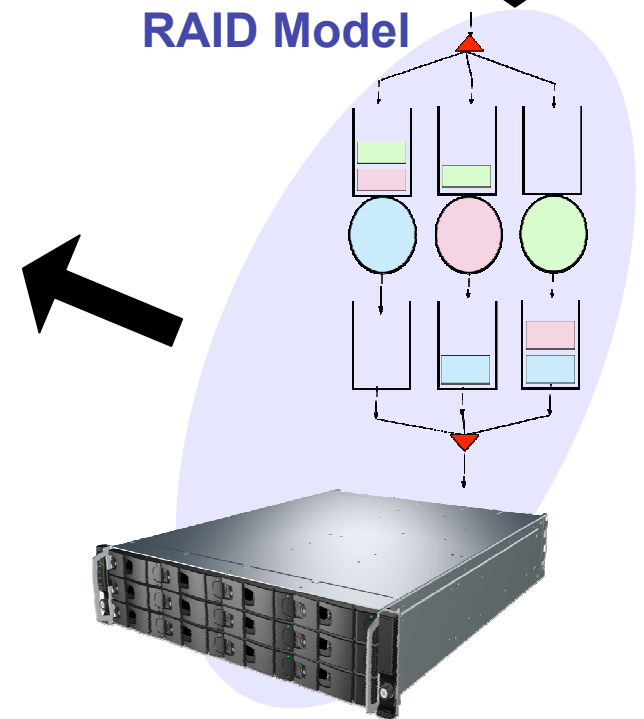
Virtualised Tiered Storage System Model



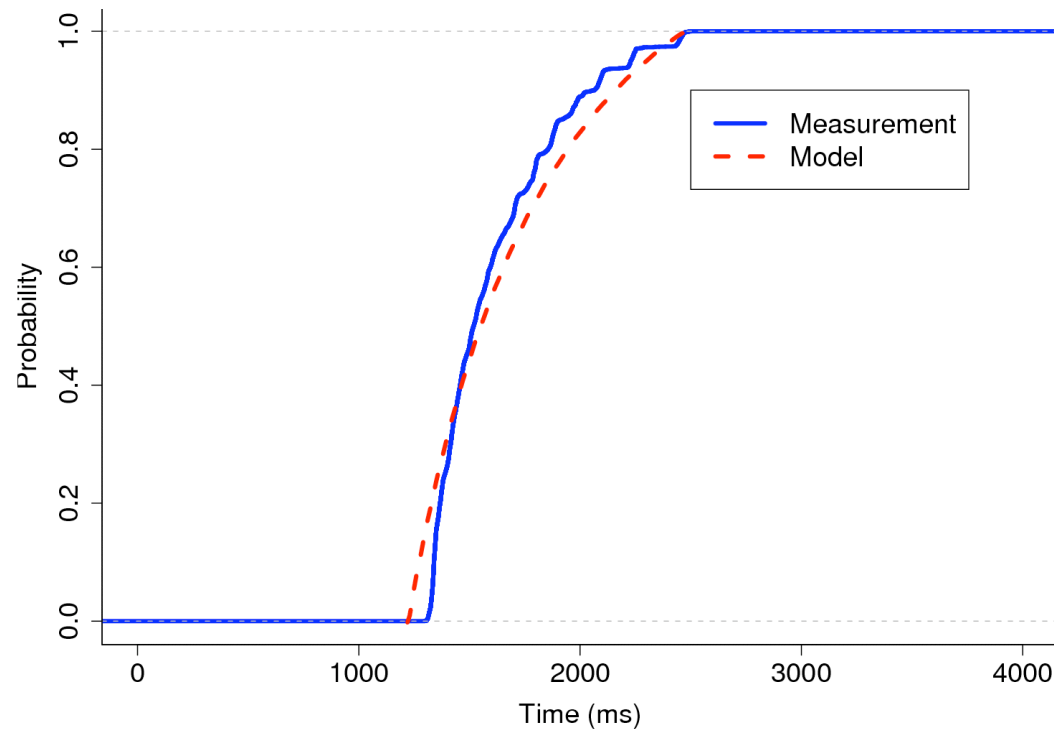
Disk Model



RAID Model

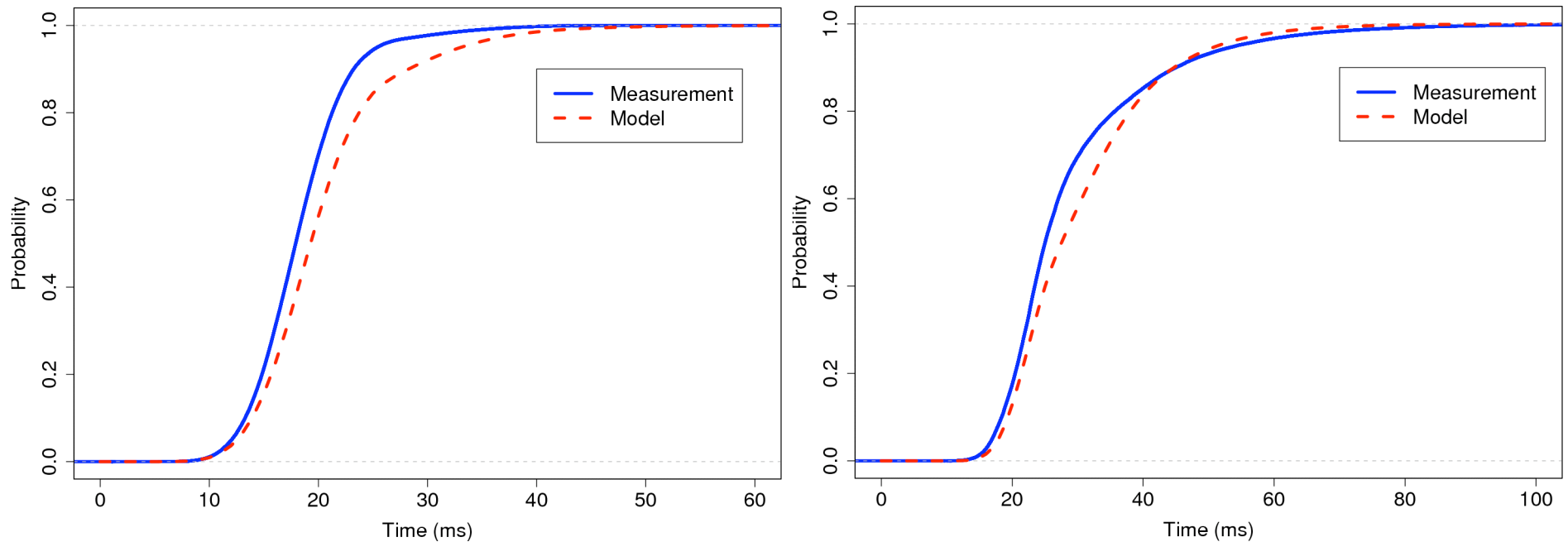


Initial Results: Zoned Disk model



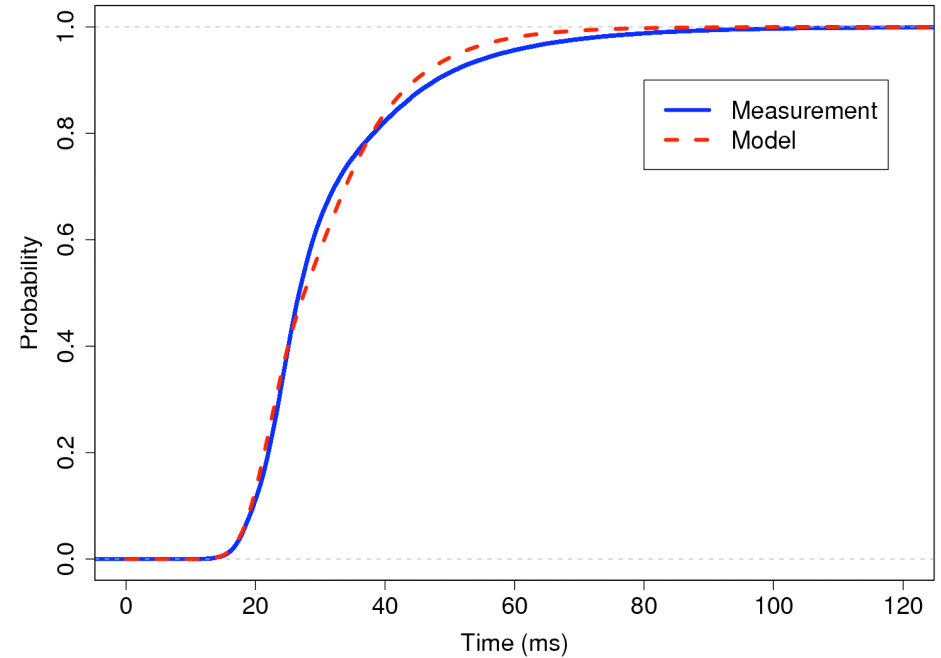
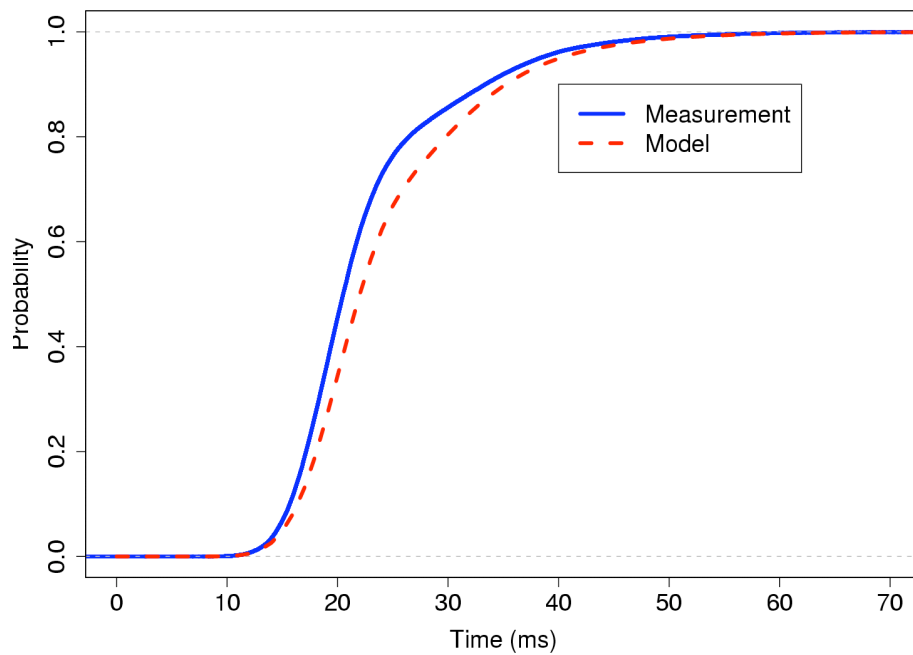
Measured and modelled cumulative distribution functions of data transfer time for 100MB requests. Measurements are taken from a single 7200rpm 500GB SATA Seagate disk (ST3500630NS).

Initial Results: RAID 0-1



Measured and modelled cumulative distribution functions of RAID 0-1 read (left) and write (right) requests. Measurements are taken from an Infortrend A16F-G2430 RAID system containing 4 Seagate ST3500630NS disks, with a stripe width of 128kB.

Initial Results: RAID 5



Measured and modelled cumulative distribution functions of RAID 5 read (left) and write (right) requests.

Thank You

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