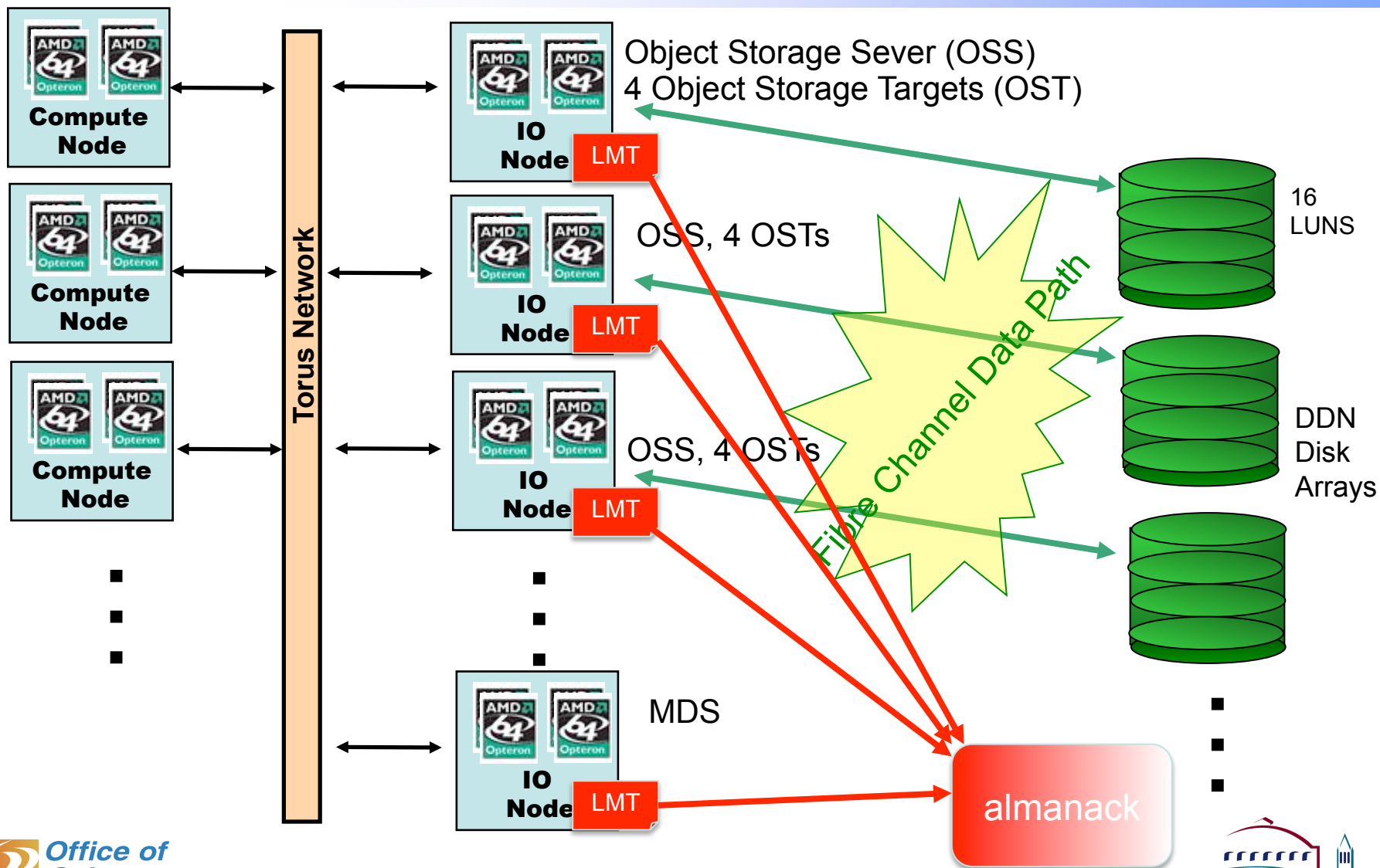


Monitoring I/O Performance

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The Franklin I/O Pipeline



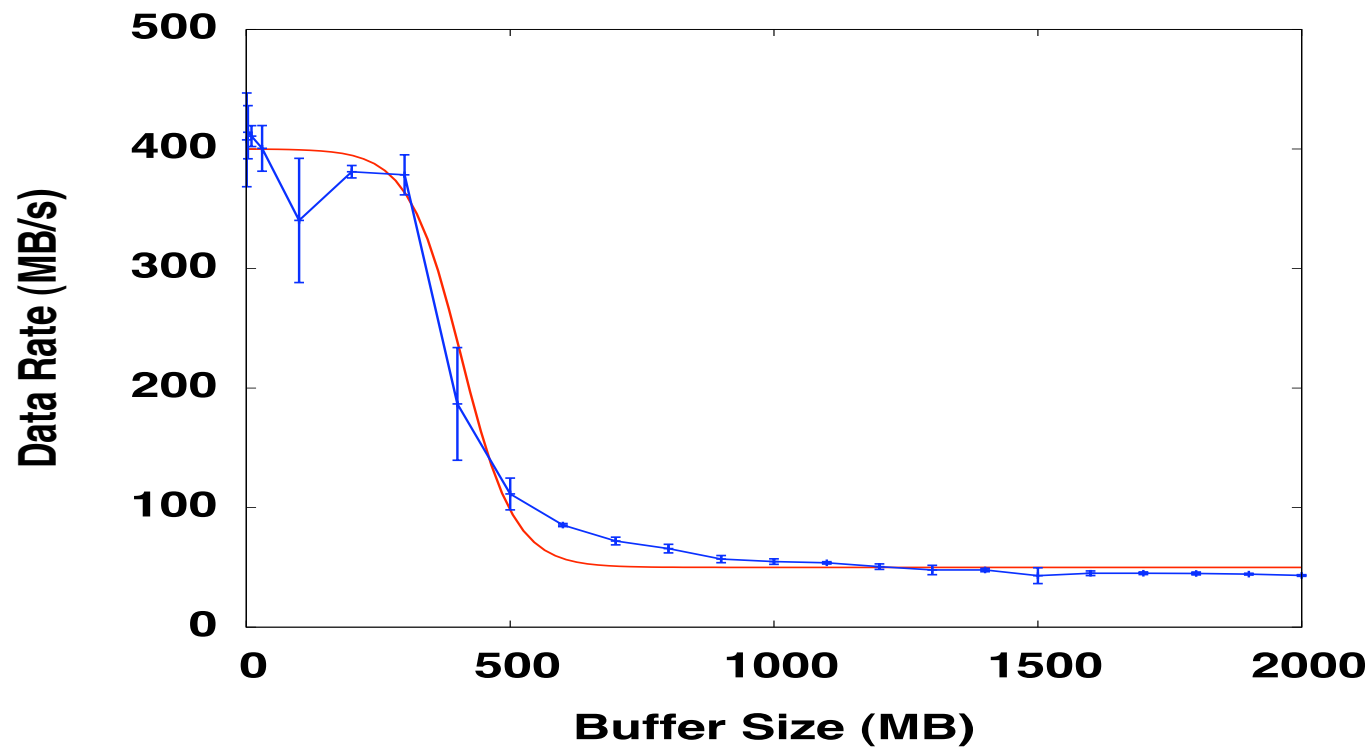


Monitoring Can Mean Different Things

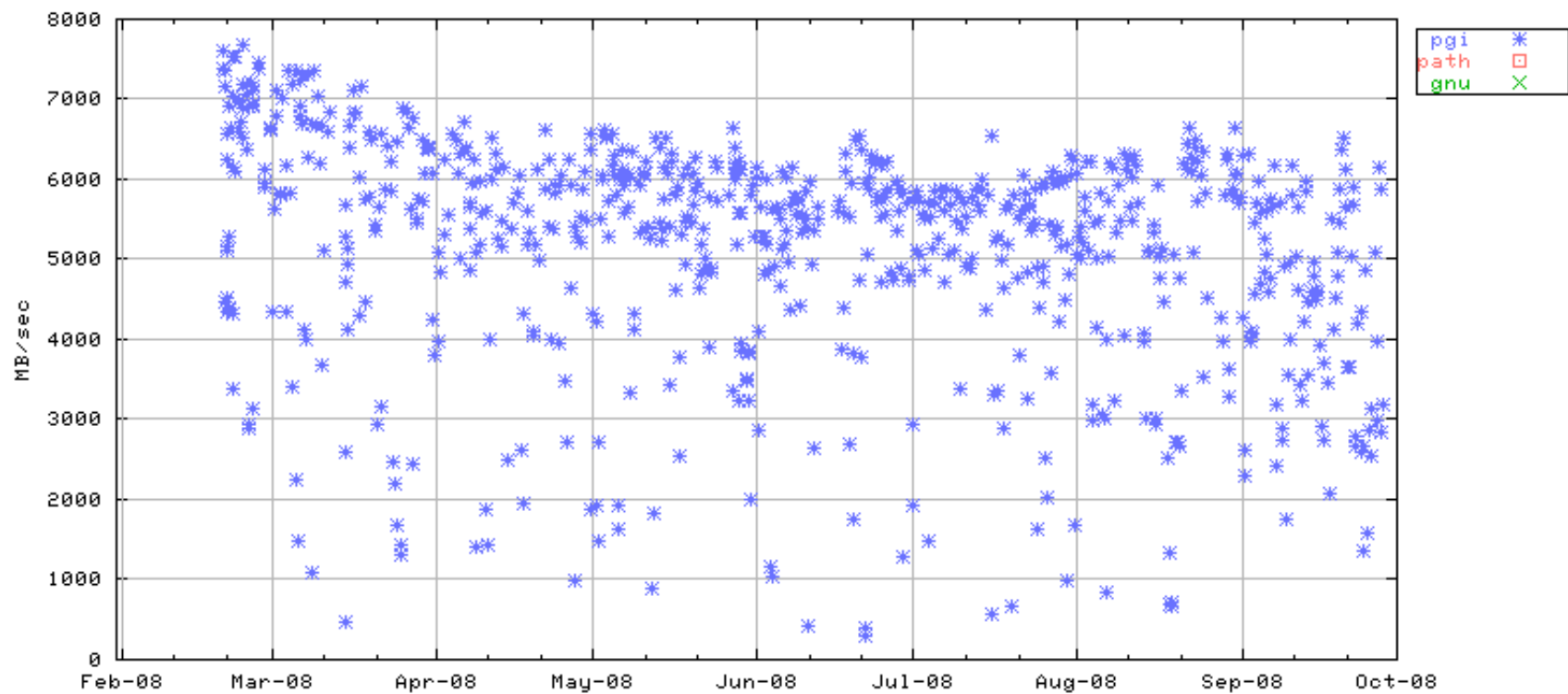
- Regularly scheduled benchmarks
- Server-side statistics
- Client-side instrumentation

Benchmarking With IOR

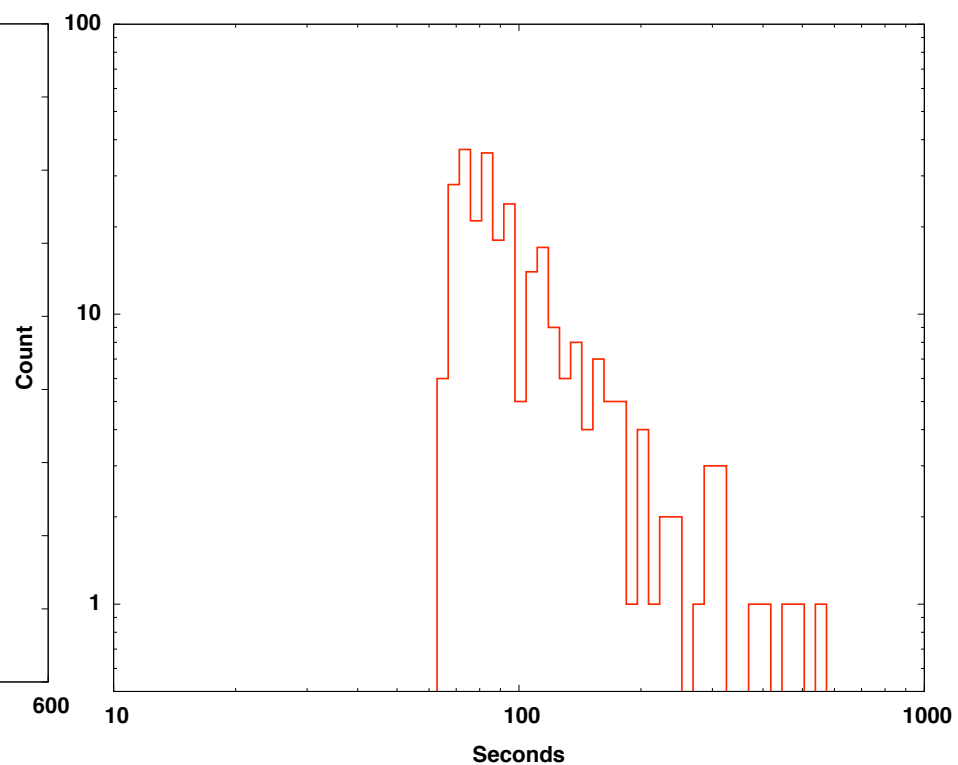
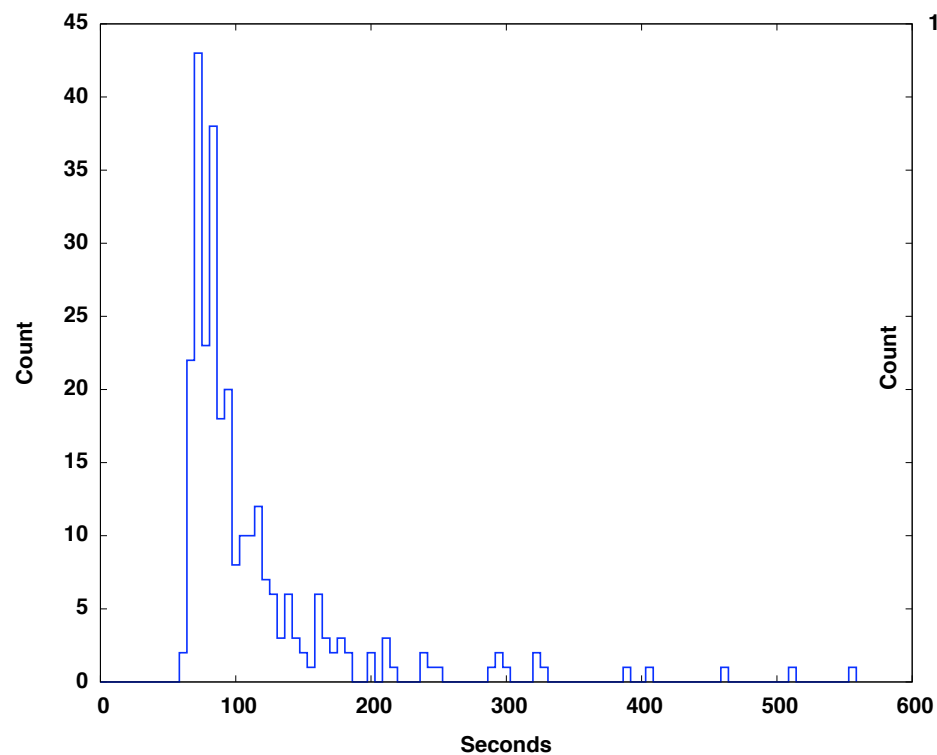
$$R = N(1 + (e^{\{(b - B)/t\}}))/(1 + (N/M)(e^{\{(b - B)/t\}}))$$



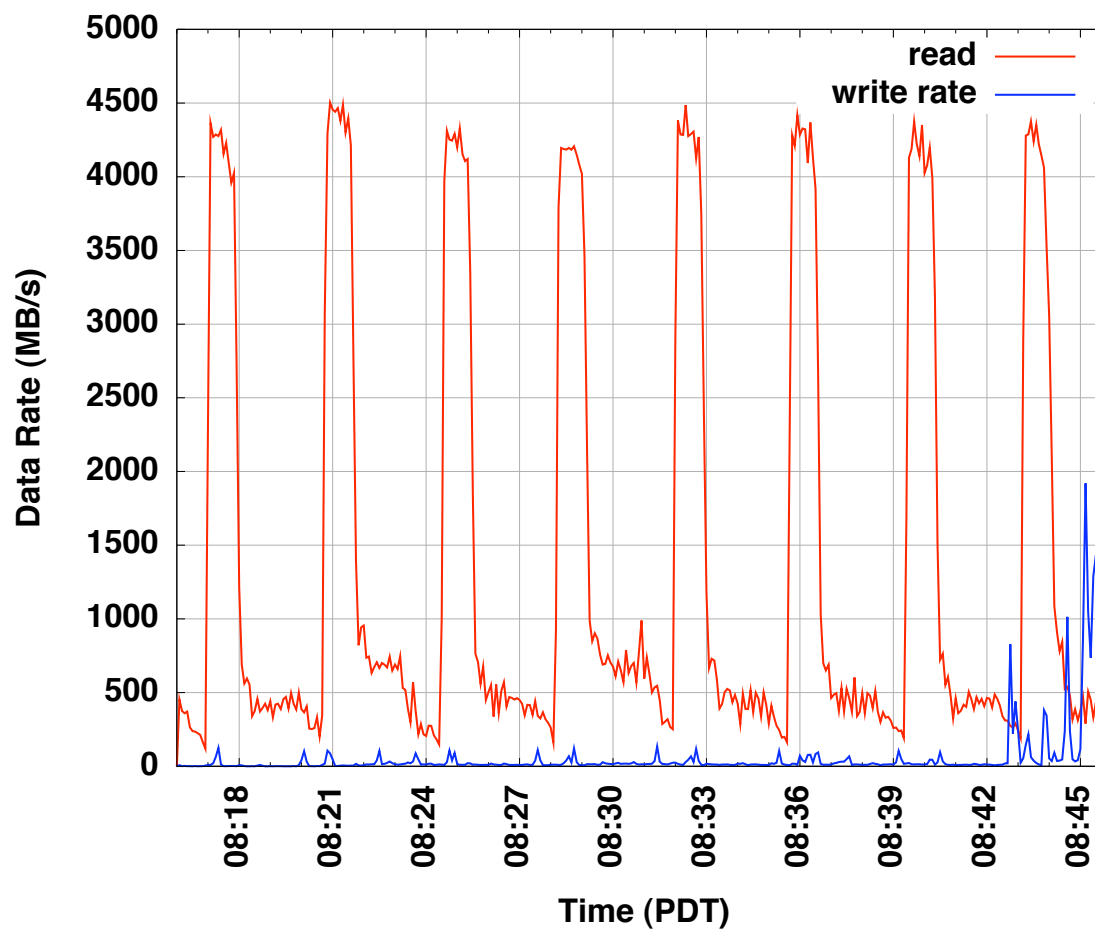
DB of Results



Do Statistics on the Results

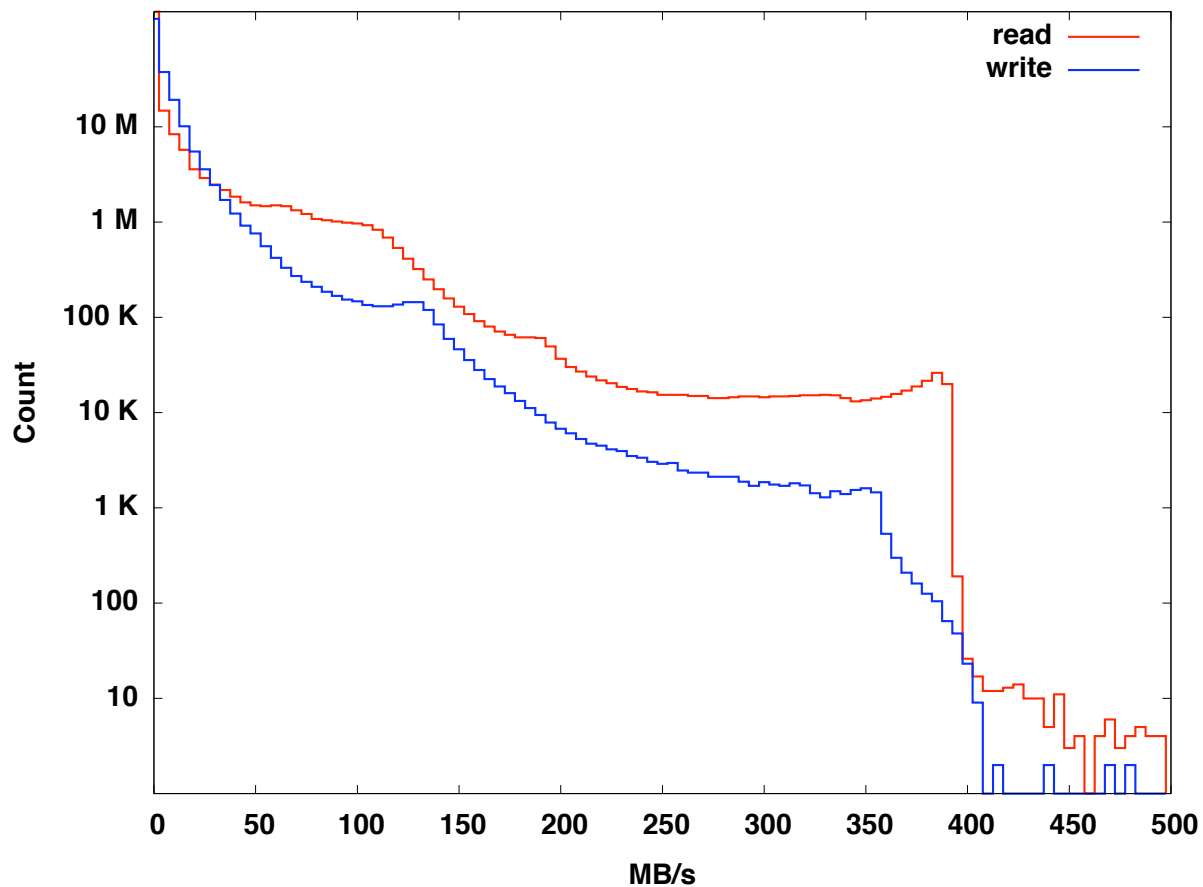


Server Side Monitoring

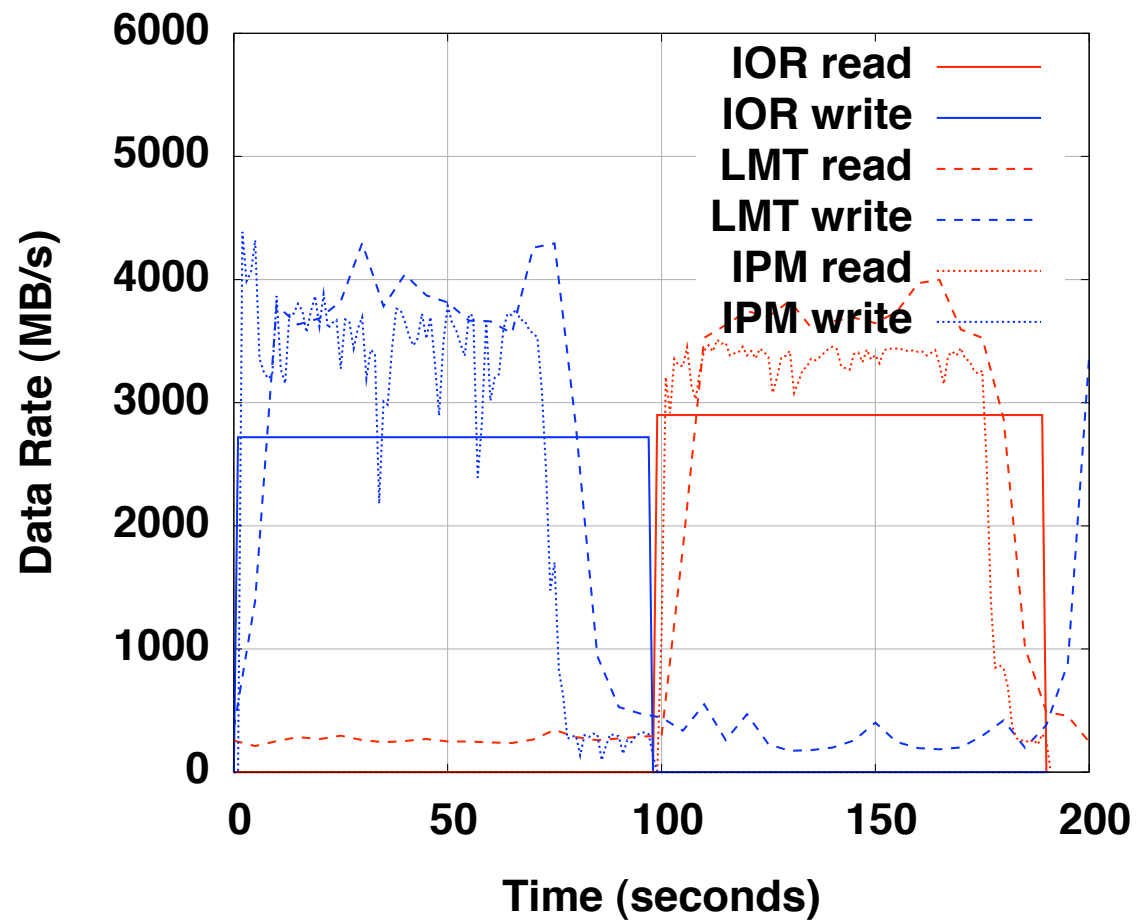


Look at the Statistics

Distribution of LMT observed rates



Client-side Monitoring



Summary

- **Have a model: benchmarking is an iterative, learning process.**
- **Keep your results in a db**
- **Look at the statistics**
- **Monitor the server**
- **Instrument your application**