

Danutella Performance Evaluation

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I. Introduction

The two main options for this project were push-based consistency and pull-based consistency. The results of the certain modes can range from similar to wildly different based on the TTRs used in the pull-based method.

Although the grading policy did not include a performance evaluation in it, and I did not have enough time to implement the performance tests, I can provide a basic hypothesis and conclusion based on what I already know about these two mods of consistency.

II. Conclusion

The Push Approach will have better success rates as peers will not send invalid files (invalid files are found instantly thanks to the origin peer's invalidation flooding). However, in the Pull Approach, peers will send files while their TTRs have not yet expired, which means many will be outdated. When compared to the origin's last modified time, many will be outdated.

Push Advantages:

- File consistency is nearly always correct.
- Peers will only download the very latest files

Push Disadvantages:

- Network may become flooded with packets because of invalidation messages.

Pull Advantages:

- Less network overhead
- Good for when files are rarely changed

Pull Disadvantages:

- Files may be sent over the network that are actually older than the current version