

CIS 726/526 Final Project

Jmeter writeup

Team HTTP 301

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We used Jmeter to stress test our website pages with one, five, and twenty users. We didn't go any further because the hardware limitations of the laptop we ran the tests on gave us less consistent results as the number of simultaneous users increased. Example Jmeter graph listener output is provided in the root directory of the website project. The Jmeter tests showed that the main problem choke-point of the website is the database accesses and processing of multiple data objects for presentation. The most computationally intensive page by far is the LeaderBoard controller action and subsequent ajax calls for infinite scrolling and player searching. All leaderboard related functions take on average almost fifty times as long as most other pages of the website which do not need to do much sorting.

Improvements to help combat this choke-point would involve caching the ordered results of the leaderboards. Doing this would create a low amortized cost to performing leaderboard related actions. To improve the amount of users the website could support at once the website could be re factored for a distributed system where multiple business logic layers could all utilize the same database. This would allow spawning of logic layer instances in response to a burst of user demand. With a publisher subscriber model message queueing system the database could publish a current cache of commonly queried lists such as the 6 leaderboards and republish new versions of these ordered lists as the database detects edits to player scores. Less vital improvements could be made to the current website design by zipping and minifying all script and css files and caching of these static files to be rapidly sent out to the users.