About Webtide

https://webtide.com/

We started Webtide many years ago when the idea of asynchronous servlets were in their infancy and the Jetty project created its Continuations library. This library in conjunction with the CometD project allowed for some of the first truly asynchronous java server support for the then emerging Web 2.0 ajax growth in traffic. Our goal then remains as today, to create great software and support it with great service.

Comprised of the primary active developers of both the Jetty and CometD projects, Webtide provides unparalleled services and support on these technologies by providing their customers with direct support by the developers themselves. Ask us a question or seek us out for support and you will be answered by a contributor to the open source projects themselves.

Webtide is entirely owned and operated by the developers of Jetty!

The role

Duties include a mix of routine tasks associated with the general support of our clients and products, plus some project related work to develop one of more identified components. All of our engineers are expected to daily spend some time tending to the issues raised on our open source project via:

- Github issues
- Project dev and user mailing lists
- Client specific issue lists eg (Google Appengine)

The student would be expected to take a share of such issues to triage, attempt reproductions, ask for additional information, etc. They may then either take part in any resolution or work with another engineer who will resolve the issue.

Key responsibilities

Development of a general purpose HTTP load testing tool. While many of these are available, most suffer from common shortcomings, which can be summarized as observing throughput in a way that actually measures latency. A proper load testing tool should actually observe latency for a given throughput to see if an acceptable QoS is achieved. These principles are discussed in several blogs we have written over the years:

- Lies, Damned Lies and Benchmarks
- Truth in Benchmarking
- Jetty in Techempower Benchmarks/
Webtide have developed several bench mark tools that we use internally that we believe both generate reasonable load profiles and correctly measure the quality of service obtained. However these have mostly been bespoke for very specific circumstances. Thus we would like to develop a more general purpose load generation tool based on these principles that will work for both HTTP/1 and HTTP/2.

Over the last 12 months, Webtide have been deploying HTTP/2 in some significant client sites. HTTP/2 includes significant new features that promise to decrease page load latency an improve throughput efficiencies: Push, multiplexed flow control and channel priorities. However, due to resource constraints, we have had very little time to analyse or test in detail the benefits of these features nor try some of the alternate algorithms available to implement them. A project for the post graduate could be to take the time to better measure how these features are affecting deployments and to experiment with alternate algorithms for flow control, push and priority.

The successful candidate will have

A good working knowledge of Java.

A good working knowledge or ability to quickly learn development tools including IDE, git, maven.

unix/linux/OSX; Servlet based web applications; JSP; above average understanding of web protocols & standards: HTTP/1; HTML; an interest in high performance scalable efficient software.

Any knowledge of the following would be considered a bonus:

- Websocket
- HTTP/2
- JEE
- Jetty
- Tomcat

Applications including CV to

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