**4.0 Performance Requirements**

EventHub’s performance requirements stress the importance of opportunities for community growth and fast query searches. In order to quickly provide search results for users, the size of the community must be scaled to a point that takes into account the load the server is able to handle at a given time. Along with search query speed, EventHub considers the login process, profile editing, and event creation to be services that require speedy completion.

At any given time, EventHub is expected to handle at least 300 concurrent users. The capacity to handle larger amounts of activity is expected to increase if greater server resources become available. In terms of the total number of profiles in the database, EventHub will handle around 1,000 profiles in its developing stages. The capacity to handle many more profiles is certainly available; however, there is no purpose in hosting a large number of accounts if only a small percentage of those accounts are able to be active at any given time. With an expectation of at least 30% of the total community being active at a given moment (300 active / 1,000 total), EventHub expects services to run smoothly.

In terms of search speed, EventHub expects event search queries to take place in under two seconds. Given that the average number of search results for any given query is ten, two seconds is the maximum amount of time it should take to process each search result and provide relevant information about each result to the user.

The login process, submitting profile changes, and creating new events should take under one second to complete. These three kinds of interactions with EventHub are indicative of simple database interactions; thus, their completion times are faster than search query times, which involve pulling multiple results from the database as well as performing certain calculations such as distances from events.