

Programming Assignment 2: **Performance Evaluation**

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The following tables and graphs display the information generated during the testing of peer-requested searches of the indexing servers' file indexes.

One Peer	
Number of Iterations	Time (ms)
10000	854

Two Peers			
No. Iterations	Time 1 (ms)	Time 2 (ms)	Average
10000	2489	2214	2351.5

Four Peers					
No. Iter.	Time 1 (ms)	Time 2 (ms)	Time 3 (ms)	Time 4 (ms)	Average
10000	6681	6348	4793	6040	5965.5

Eight Peers									
No. Iter.	Time 1	Time 2	Time 3	Time 4	Time 5	Time 6	Time 7	Time 8	Average
10000	--*	26049	24177	19876	19558	20913	24761	14530	21409.1

*Note: The delay before the test runs skewed the first time.

Based on the gathered information, it is apparent that increasing the number of search iterations dramatically increases the amount of time required for the servers to search their file indexes. It can also be noted that having more peers searching at once has some effect on the average time it takes the peers to be notified of their search results. This makes sense because each peer does the search one at a time in a sequential order. The actual latency is the sum of the times of the peers. For example, for the two peers, the latency is $2489 + 2214 = 4703$.