Programming Assignment 1 NAPSTER PEER TO PEER SHARING SYSTEM

CS550 – Advanced Operating System February 22, 2018

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PERFORMANCE EVALUATION:

Steps to Run Performance Evaluation:

- Navigate into the the Performance_Evaluate folder:
- The Folder contains:
 - "CreateFiles.java" and "Perf_Test.java"
 - "CentralIndxServer.java"-To Run the Server and "PeerServer.java"
 - To Run the Peer and to perform the Search with Timestamp.
- A folder called "Dummy_Files"
 - o 1000 files will be automatically created when CreateFiles.java is executed.
- "indxip.txt" Edit the File, and Enter the IP Address of the CentralIndxServer into the file.
- To Create the Files automatically (1000 files):
- First Edit the PATH, in the file "CreateFiles.java"
- Example: Inside the file, there is a path to set the files to be created.
- String filename = /Home/.... /...../Dummy_Files/ -> This is the Path where the 1000 files will be automatically created.(Set the path).
- To Register those 1000 files which have been created in the Dummy_Files folder, Edit the Path in the file: "Perf Test.java"
- Inside the file, there is a path to set -> for the files to be Registered.
- File folder = new File("/Home/....../Dummy_Files/") -> This is the Path where the 1000 files that needs to be registered are present.(Set the Path).
- Run ant:
 - o Ant
- Or run the following command
 - o javac CreateFiles.java
 - o javac Perf_Test.java
- Run the CentralIndexServer on different machine:
 - o java CentralIndxServer
- The CentralIndxServer is started and it starts to listen on port for incoming peer connections.
- Run the CreateFiles.java -> To create 1000files in the Dummy_Files directory
 - java CreateFiles
- Run Perf_Test.java -> This will Register all the 1000 files present in the directory specified by the path in the Perf_Test.java file
 - o java Perf_Test
- Now Run the PeerServer.java: -> This starts the Peer, and this can be used to search for the files which have been registered.
- Timestamp has been added to calculate the Time taken for Register as well as Search functionality.

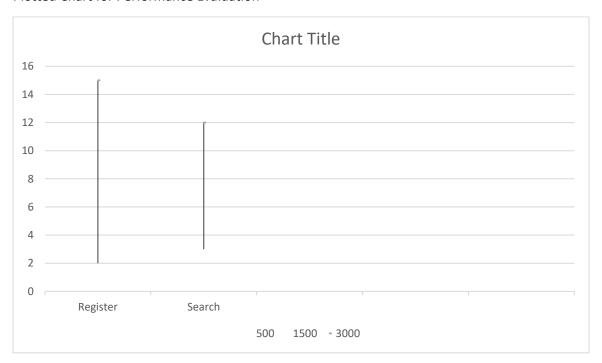
The Performance_Evaluation Test Results are as follows:

- 1) REGISTRATION:
- a) For 5 Files -> Less than a Second

- b) For 10-15 Files ~ Less than a Second
- c) For 100 Files ~ 1 Second
- d) For 500 Files ~ 2 Seconds
- e) For 1500 Files ~ 6 Seconds
- f) For 3000 Files ~ 15 Seconds
- 2) SEARCH:
- a) 500 Lookup 3 Seconds
- b) 1500 Lookup 6 Seconds
- c) 3000 Lookup 12 Seconds
- 3) DOWNLOAD:
- a) 1kb File Download Less than a Second
- b) 5MB File Download 8mins.

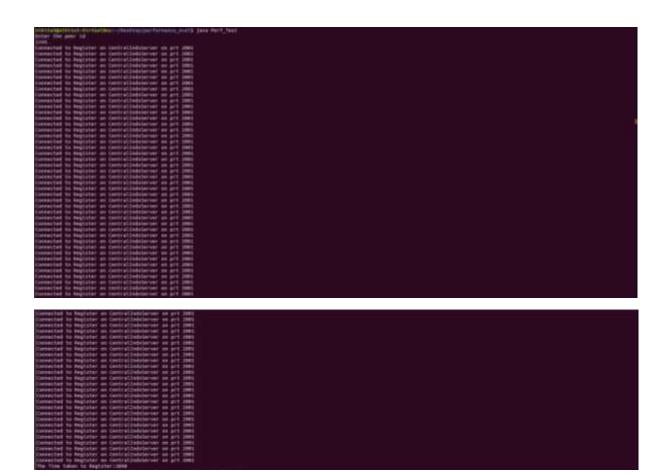
Peer-To-Peer File Sharing System

Plotted Chart for Performance Evaluation



Few screenshots of Performance evaluation:

Time taken to register:



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