CPSC 353 Class project Name: Nikolai Eiteneer

Submission 3 – Final Submission

Name of your project:

Cloud Computing Inc.

Name of your Team:

The Clouded Computing Center

Members of your Team:

Nikolai Eiteneer

José Sirés Campos

Project description:

The goal of our project was to create a client and server pair, which would be able to store and transfer files between the server and client. This was accomplished by allowing the client to either "Put" or "Get" files to or from the server respectively, while the server would store received files, or send files for which it had received requests. Additionally, we added a "List" command, a request for the server to list all of the files in its possession, allowing the user to download files they potentially did not remember the names of.

Instructions for compiling and running your project:

We have submitted two zip files, one called Cloud Computing Inc Client and one called Cloud Computing Inc Server. Each includes a Makefile to compile the code within the zip. The Client and Server should be installed on two separate stations, and all of the files that will be sent to the server should be placed in the same directory as the client. The Client will request the address of the server and once this is provided, files may be freely shared between the two stations.

Features you have been able to implement

The commands available to the Client are "PUT" or "GET" followed by a file name within the client's or server's directory, or "LIST", which will provide the client with a list of all files within the server's directory. The Server will "STORE" all files which are "PUT" to it, or "SEND" all files for which it receives a "GET" request. Additionally, the server will maintain a list file which it will update with every received file. Large files will be fragmented and sent in pieces, and recombined at either end.

Features you had intended to implement (as stated in submission #2) but were unable to complete.

None

If you are working on a team with more than one person, describe the contributions made by each member of the team.

José: Coded the Client and Server, as well as all secondary java files needed to run the two applications

Nikolai: Created the Zip and MakeFiles for submission, as well as general research into fragmentation and FTP commands

Network content – which concepts from this class were explored and/or demonstrated by your project

Our project focused on manipulation of the transport layer in order to send and receive files between a client and server, similar to the functionality provided by FTP. The purpose of our program, however, was to create a personal server for individuals to be able to retrieve their own files. It is for this reason that there is no user authentication within the program, it is assumed that only the user knows the address of their server. This does, however, provide less security for files stored in this method. Additionally, FTP uses two channels, one for commands and one for the actual file transfers. Our application simplified this approach based on the idea that the server would not always be on, and that a single user could control whether or not the server was listening when they needed it to be, rather than having a server constantly listening on one of the channels. This means that our application would take up less bandwidth than a similar FTP application.