Working Prototype Known Problems Report

Product: BackupBuddies

Team: Free Cloud Backups

Unclear storage slider functionality:

- **Description: Allocating a storage amount less than the amount you are currently hosting does not remove the files, rather it resets the max amount you can store.**
- **Inputs: Sliding the slider below the amount that the user is currently storing**
- **Location: Network.java could be made to choose existing files for deletion**
- **Solution: Implement a function that dynamically chooses files to delete based on to be determined criteria.**

Connecting to a new network opens connections in an unscalable manner:

- **Description: When introducing a new peer to the network, the new peer checks for connection availability for each other peer in the network.**
- **Inputs: Connecting to a network with multiple peers**
- **Location: Network.java, Peer.java, NotifyNewPeer.java**
- **Solution: Implement a scalable way to keep track of peers availability status in the network**

Strict firewall configurations can block peers from connecting:

- **Description: Some networks are configured with firewalls that block incoming or outgoing TCP connections**
- **Inputs: Connect to a peer that is protected by a firewall**
- **Location: The user's network configuration**
- **Solution: Implement TCP hole-punching, although this is not a perfect solution**

File Upload sometimes causes freezes with very large files:

- **Description: Often, the GUI will wait for a file to finish uploading before repainting. In certain circumstances, it can stay frozen on a failed transfer.**
- **Input: Selecting a peer and uploading a file.**
- **Location: Interface.java, Network.java**
- **Solution: Add locking as needed to avoid data races**

The active location on the log refreshes when a new event is added, even when moving the slider:

- **Description: Events added to the log will snap the scrollbar to the new event, only allowing the user to see previous events until a new event is added.**
- **Inputs: When performing any action that displays to the log, (uploading, downloading, setting the encryption password, etc)**
- **Location: GuiMain.java, line 145-151**
- **Solution: Only snap the scrollbar when new events are added and when the user is not currently viewing a different event**

Pop-up warning for the slider pops up only once on click when not connected to a network:

- **Description: If the user ignores the first pop-up warning for the storage slider, it will not warn them a second time. The actionlistener stateChanged() fires in different circumstances for different operating systems.**
- **Inputs: Before connecting to a network, allocate different storage sizes multiple times after being warned no change has been made.**
- **Location: GuiMain.java, line 595-608**
- **Solution: Write a custom action listener that is more consistent across operating systems**