## **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 scrolbar 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