

Working Prototype Known Problems Report

Product: Free Cloud Backups
Team: BackupBuddies

INFO: List all problems with your software that your team has identified. Include in the item entry the input/action that causes failure; location of fault (if known); possible action for removal of fault.

Known Problems:

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.

Multiple copies of the same file are shown when uploading to multiple peers:

Description: this is probably fixed. The file shows up multiple times in the GUI - once for each peer who stores it.

Inputs: Uploading a file to multiple peers

Location: Interface.java

Solution: Deduplicate files in the interface

Connecting to a new network opens an exponential amount of connections:

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 that already has multiple peers on it

Location: Network, Peer, NotifyNewPeer

Solution: Only connect to a set of users when sending or retrieving files.

Firewall stuff

Description: Many networks are configured with firewalls that block connections

Inputs: Connect to a peer that is protected by a firewall

Location: The user's network configuration

Solution: If both peers get a NotifyNewPeer message at the same time, they'll both try to connect. This is basically TCP hole punching. It can sometimes fail.

File Upload is implemented synchronous and blocks, sometimes causes freezes:

Description: When uploading a file, the GUI freezes until the file upload is complete. If the file fails to upload completely, the GUI will stay frozen.

Input: Selecting a peer and uploading a file.

Location: Interface.java, Network.java

Solution: Move upload functionality off the GUI thread, and add locking as needed to avoid data races

Event log scrolls to the bottom when new events are added:

Description: Events added to the log will snap the scrollbar to the bottom, not allowing the user to see the new event.

Inputs: When performing any action that displays to the log, (uploading, downloading, setting the encryption password, etc)

Location: GuiMain.java, line 145-151

Solution: Set the scroll bar to only move when the user clicks on it, even if new events are added.

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

Description: 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