Last Stand Cloud - Alpha Build 2.0

Introduction:

Hello! Welcome to Last Stand Cloud's 2nd Alpha release! There have been some major changes as we transition from the initial release, made to just get it working, to a more viable piece of software looking more and more like a final product, ready-made for end users. The improvements made with this update have made steps towards correctness, performance, and enhanced security. It moves Last Stand Cloud closer to a true remote, peer-to-peer connection without any need for port forwarding or anything else like that.

Future Last Stand Cloud updates will probably be more rapid and less grandiose. This update adds integration with the website and some redundancy and security improvements to ensure users' data is kept safe and private.

Binaries for this version of the alpha are available for macOS, Linux & FreeBSD. Make sure to go through the official website and download either the server & client zip or the client only zip. All these files are needed to be kept together in order for the software to work as intended.

I hope you enjoy my software, and that you can break it now so that it will be much stronger in the future!

Usage:

The 2nd Alpha of Last Stand Cloud changes the interface and command-line interactions you have with the server/client. Now, you need to register and create the cloud on our website before downloading the software, because going forward, you will need to authenticate yourself before using either the client or the server end. This is due to the integration with laststandcloud.com, where the website needs to be sure that all the information it stores about your cloud is accurate.

For both the server and client end, you MUST navigate to the directory that was created when you unzipped the download zip file from the website. The server and client both WILL NOT WORK if you are not inside this directory. The reason is because, for now, the client/server's interactions with the website depends on a file named "server_id" that contains the unique ID generated for that cloud. Also, the server has it's ssl credentials located in that directory and needs it to ensure SSL/TLS security.

The interface has become cleaner and hopefully more professional. To run their server:

```
# sudo ./laststandserver
# Enter your username: [username]
# Enter your username: [password]
```

The server will run on its own, accepting clients, backing up files and it will connect to laststandcloud.com every six hours and update its login information. The server will authenticate any client that tries to connect to it on its end, the website will not authenticate/verify clients before forwarding. This is done to preserve resources for the website. Any files successfully transferred from the client to the server will be stored in the 'backupfiles' subdirectory.

To run the client and backup a file:

```
# sudo ./laststand /path/to/file
# Welcome to Last Stand Cloud!
#
# Enter your username: [username]
# Enter your password: [password]
```

Your login credentials must be for an account authorized to send files to this server, or else it will reject your connection. The client will ask the website for the IP address of the server, then it will connect to the IP address given.

Scope:

This version of Last Stand Cloud has expanded the capabilities of the software in many essential ways. Though, to the user, there may not be that much of a noticeable change, the change in the complexity of the inner-workings of the software have made some amazing changes. Even though we are still limited to local network connections, the features added here are very important steps toward creating the eventual remote cloud Last Stand Cloud is intended to be. This version of the Alpha adds integration with the web server's API, and the forwarding/routing backend that will eventually be the engine for remote cloud connections.

The server now checks in with the website every six hours, updating its IP address, and in return the website sends it the authentication information for users that are allowed to access the server. It checks whether the client attempting to send it a file has been allowed to send files. In order to run the server in the first place, you must also enter your login info so that the website can be sure that the info it is receiving is correct and legitimate.

The client will now ask the website for the IP address of the server, instead of asking you directly, and will then forward itself to the server's address. Once connected, now the client will check the server's SSL/TLS certificate to make sure it is the same one held on record by the website, to ensure the server is who they say they are.

In addition to these numerous checks and additions to security/privacy, there have been many optimizations and corrections made to the code base. I've optimized many of the operations and functionalities of the server and clients, to improve runtime and reduce the memory footprint. This means that it will take a shorter time to send your files, and that the server can handle more and more connections at the same time, and faster. I have also done extensive memory debugging and have plugged many of the memory leaks that were present in the initial Alpha. I can say successfully that there are no more leaks, at least those that can be found with Valgrind.

What I Need You to Do:

Bugs:

The bug hunt is the most important part of this alpha, and the most valuable help that Last Stand Cloud can be given. Simple one-off errors like being unable to run the client or server because its dedicated port is in use, or your network connection going out and cancelling or corrupting a backup is not what I'm looking for. Generally, if an easy to read error message is printed out or something is written in either the net_errors or bit_errors logs, it's not what I'm talking about. However, something like, one specific file type causing the same error to be printed in the logs would count. Anything that causes a core dump, abort trap or and kind of segmentation fault is key for us to learn about. Anything unusual, that doesn't seem like it was intentional or even anything you think can be optimized and improved, let us know!

Reporting:

This is the most boring part of the task I need you to complete for me. I need to, once you find a legitimate bug, report to me in the most descriptive way possible, using screenshots, timestamps, anything you can find or can tell me about exactly what happened. I need you to accurately describe to me every little detail you can think of. Anyone who finds me a legitimate bug will get 1 free year of the premium version of Last Stand Cloud. At this time, I cannot offer any financial rewards or compensation, but that may of course change over time. While Last Stand Cloud is still small, we unfortunately can't repay you like Microsoft or Valve would for finding bugs but we will not forget you, and if we ever can we will help repay Of course, final say for whether or not you get credited is up to me based on the quality of your report. Reports are of course a first-come, first-served basis; and the first person to report the
bug will be the one who is rewarded. This is done based on when the issue was sent, not by the time we received it for fairness' sake.

To report a bug, message me at: laststandcloud@protonmail.com with your full report, or fill out the issue report form on the website

Also, send me feature requests and if it I decide to use it, you will receive the same rewards as above

Thank you to everyone who signed up! I appreciate what you are doing for me

-Vincent Trolia