Last Stand Cloud - Final Alpha Build 4.0

Introduction:

Hello! This part of Last Stand Cloud's journey has finally come to an end. The goals I had first set out for Last Stand Cloud have finally come to realization, and the alpha stage goals I have set from the beginning are finally complete. The main goal, for you to be able to access a locally hosted cloud from anywhere in the world is finally here! Now, Last Stand Cloud's usability is the same as iCloud, OneDrive, Google Drive and the others. Along with being able to have a home cloud you can access from anywhere, it is also private, secure, and up to 2x faster than other competing home cloud software! This is the last alpha release, and probably the last release for a while, as now the beta stage is coming. Once the qa and bug testing of this build is complete, the first beta will finally begin.

As usual, the checklist for features as of the first beta release are as follows:
- a Graphical User Interface so that nearly everyone who uses a computer will be able to use Last Stand Cloud. The idea for this GUI is that it will essentially be a wrapper for the command line version as a separate executable. This would mean that the command line client would still be available for usage
- Server-end file encryption, so that even if someone somehow manages to get onto your cloud computer, they wouldn't be able to retrieve any data from it. The only way that data can be read and accessed correctly would be through the client and server directly communicating and the server sending decrypted data. Turning on and off the file encryption will be an option stored in the laststand.cnf file

I do not expect the beta features to be implemented until the qa and bug testing of this final alpha is complete. This means there will be months without a new official release as crafting the first beta will take up some time as well. The final alpha is pretty much feature complete, as that was its main goal, but this final alpha is meant for ironing out the last of the bugs that plague users.

Usage:

In the final alpha, one of the main changes is not to the user interface, so calling the software from the command line will look largely familiar. The main change is that laststandserver now automatically port forwards itself so that it can be accessed from anywhere on the internet. However, the only other change that is visible is the removal of the annoying server_id file and the limitation of having one client for each cloud. Now, when running the client end, it will ask you which cloud you want to connect to and connect you to whichever cloud you want. That limitation has been finally and wonderfully removed. For many of the added features, there are flags to be passed in for statistics and version info. For laststandserver, you can call the executable with these flags to get information separately from the running version of the server. Now, once you run the install.sh and client-install.sh scripts, laststandcloud and laststandserver will be able to be called globally in your terminal/bash shell.

To ensure full compatibility, when running the installer scripts, instead of running "sudo ./install.sh", make sure to run:
"sudo bash ./install.sh"
"sudo bash ./client-install.sh"

The server's installer script will configure itself to be a startup background daemon on the installing computer. The main purpose of calling the executable would be to get usage statistics from your running server daemon. Other than that, the server will run on its own on your computer on startup, so the command line server does not need to be called.

For dependencies, you will need to have OpenSSL, libssl and curl installed, which are included by default in many operating systems or can be installed easily with your operating system's package manager. However, if they are not installed, the installer scripts for the server AND the client will install them for you. Python3 is a requirement once again, but it is only used by the installer scripts and are not needed to run the client or the server.

Also, a brand new service called Last Stand Verify has gone live to better authenticate servers AND protect your privacy. Previously, laststandcloud.com would authenticate your server and generate a certificate and private key, storing it in a database and the client would have to check if the certificate is valid after connecting to the server. This caused lots of problems in the previous version, and it would allow Last Stand Cloud to decrypt your data and analyze it. This has been completely overhauled and re-secured with Last Stand Verify. Last Stand Verify is our new Certificate Authority, and it functions just like a Certificate Authority that helps your favorite websites utilize HTTPS and secure mail, and coming soon you will be able to use Last Stand Verify for a web certificate. What this means for Last Stand Cloud, however, is that each server will create its own private key when it is first run, and generate a certificate request that will return a signed Last Stand Verify certificate. Then, the server will check every few hours to see if the certificate will expire, and request a new one when they certificate expires. This means that all we see is the server's public certificate and we cannot decrypt your data even if we wanted to. Also, another step has been included so that the server will not run/handle clients if the server is using a self-signed certificate. This is done to ensure that the server is who it says it is and your data will not be compromised. Outside certificates are also fine, but the server will automatically grab a new signed certificate from Last Stand Verify for free whenever it needs one.

WINDOWS:

That's right, you read it here correctly! Last Stand Cloud has finally come to Windows! If you are a Windows user and have downloaded Last Stand Cloud, the setup process is much simpler than the Linux version, as it is meant to be standalone without much reliance on the Operating System for the needed functionality. Now, this of course means that while the client end is available on Windows, the server is not. At this point in time, I am working on figuring out how to get the server working on Windows Subsystem for Linux(WSL) and there are no plans to fully port the server to Windows. However, like I said before, getting the server working on WSL is actively being developed and hopefully will be able to be used soon. Check the Last Stand Cloud's download page in the future as I plan to publish a full guide on starting Last Stand Cloud on WSL as soon as I figure it out. This is not the case with the client, however, and the full functionality of the *nix version is completely available on Windows with no compromises. In order to get the client working, first a sqlite3.dll must be in your System32 folder. The dll comes with Last Stand Cloud and there's a short installer batch file that will do this for you (make sure to run as administrator) or you can find it on your own and install it if you don't trust the one we provide or trust us to modify your System32 folder. Other than that, once the dll is installed in the correct place all you need to do is cd into the directory where you have the client installed and run it just like every other version of Last Stand Cloud, with 0 changes to the command line interface of the other versions, except for one. Because the Windows version is standalone without an installer script, the first time you run the client or if you delete its databases, it will prompt you for your Last Stand Cloud account login then store it. Other than this change there is absolutely no difference in the interface compared to the *nix version. Also just make sure to remember to call "laststandcloud.exe" instead of "./laststandcloud".

Currently, the only version of Windows that is supported to work with Last Stand Cloud is Windows 10, at the minimum build of 17063. Versions of Windows without curl or tar will not work, including windows versions before 10.

Now, for the actual usage of the server:

- First of all, with the permissions and writing that the server needs to do its job, it must be run as ‘sudo’ or a superuser, or else it will exit. The server will not run if it is not being used as a superuser.

Next, to run the server, you call the executable without any arguments or flags.
The flags available are:
[i,v,o,d]
i/v - stands for [INFORMATION/VERSION] get the current information about the current version of Last Stand Cloud
o - this flags stands for [OUTPUT]. it takes an argument and will output to the console various usage statistics of a currently running laststandserver instance.
[OPTIONS]
if - prints out the server’s private and public IPv4 addresses
hardware - prints out the server’s RAM and disk usage
time - the current running time of the server
all - print out all of the above information
h - prints out a manual page that describes all of this information

For the client:
- This version of the client does not require ‘sudo’ access when it is first called. When the client requires root access, it will ask for the sudo password
to run the client and backup a file, run:
laststandcloud [filepath]
and it with back up the file specified in [filepath]. Now, similar to the server,
it can be called with flags:
[i,v,f,s,t,b]
i/v - same as server, get the information about the current version of Last Stand Cloud
f [filepath] - stands for [FETCH] grab the file specified by [filepath] and store
it in the designated location, ex. “home/user/file.ext” will store “file.ext” in “home/user/”
s - this stands for [STATS] and is similar to -o all on the server end, it will query the server for its usage statistics and print them to the terminal.
t [hours] - stands for [TIMED] set to backup a file every [hours] hours. You will next be prompted for the file path of the file you want to backup periodically
b - stands for [BACKUPS], and you can get the information on all your timed backups, or remove one
[OPTIONS]
list - list the current backups running, shows the file being backed up and how often it is being run
remove - lists the current backups running, and their current PID, 0 if it is not currently running

Scope:

The final alpha is the version where all the serious bug hunting begins. The features I feel were needed for Last Stand Cloud to be complete are all here. The keystone features are all there, and its ready to go to the next level, and become fully legitimate software. As far as functionality, the server end is pretty much feature complete aside from a few optional things to add in the future with the beta. Now that Last Stand Cloud is moving forward with support for all major operating systems, in the beta there may be even more support for other distributions of Linux or other BSDs or even Windows older than Windows 10. While the

server is basically complete, ensuring everything works correctly on the client and building upon its foundation will remain the main focus of its development in the near future.

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