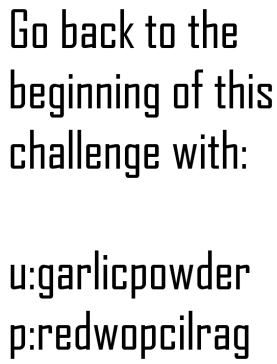
Osiris Challenge 6 Documentation

Answer: Charles Babbage
Time: 11:56 AM

Go back to the beginning of this challenge image:



Description: We were given a physical sheet of 1s and 0s which we hard coded into a text document which was then put into our binary decoder to get a message providing us with an ftp server address and instructions on how to get the passcode.

FTP at 138.47.99.64 - port 21 - user is salt - pass is tlasXXXXY - where XXXXXX is a TimeLock code and Y is the last character of the final TimeLock hash - TimeLock epoch is 2021-01-01 00:00:00 - sync your time using telnet or netcat on port 54321

From there, we used our TimeLock program to generate the right password to get into the ftp server where we found several bmp files that we downloaded. After that, we ran through multiple different iterations of the steganography program with an iteration bash script we wrote trying to find the right offset and interval to no avail. That was until we found we needed to make the output file a text file which helped us to find a hidden binary message. That binary decrypted into a ciphertext with a provided key that, once decoded with the key “Vigenere”, provided us with a different ftp login.

A cipher that starts with a V. Use it as a key to help you!
Bw hepo ks opk frkzriqtk bj klda ilnpciiok avxy y:kmvtrv g:vzxvic. Xyii okx glv hzuurf slx.

Go back to the beginning of this challenge with u:pepper p:reppep. Then get the demons out.

In this second ftp server we found two files that could not be opened with any application. Upon further inspection we found that the files were the exact same size and from that information (and a demon hint) we decided to implement the XOR program. After the XOR program was decrypted we were provided with a 3rd set of ftp credentials which led to a conclusion file that asked a simple question: “Who invented the computer?”
Charles Babbage! :)

Contribution:

Madeline Ballew - Hard coded the initial binary to successfully get the FTP information, logged into ftp server with every new username and password, helped deduce the image file that needed to be decoded. Found who invented the computer. Created the shared file for images and document

Keaton Love - Tried scan sheet of binary in various ways. Ran steg variations on multiple image files. Grabbed garlicpowder and pepper files.

Amiyah Frierson- Attempts at decoding physical sheet of binary into copyable text and stegging images of spices for decryption; FTP server login

Noah Jones - Handled logging into ftp server and grabbing files. Discovered that XOR was needed from the second ftp server provided files and used that to find the final set of ftp login credentials. Also found the conclusion file.

Jay Reich - Made iter.bash to do several iterations of steg.py. Found the “Ignore everything that is not "binary."” file. Grabbed images from the salt ftp user. Used xor to depcrypt files to get garlicpowder user & password.

Jace Peloquin- Attempted various methods to extract binary text from physical paper. Figured out Vigenere cipher key, and successfully decoded
‘A cipher that starts with a V. Use it as a key to help you! Bw hepo ks opk frkzriqtk bj klda ilnpciiok avxy y:kmvtrv g:vzxvic. Xyii okx glv hzuurf slx.’ into ‘Go back to the beginning of this challenge with u:pepper p:reppep. Then get the demons out.’
The key was “vigenere”

Also found out who invented the computer and alerted the professor of completion.

Ethan Hebert - Helped decode the original paper binary by hand. Decoded all binaries with Binary.py. Edited the timelock code and found the correct code for the ftp server.