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CIS 484

Project 4 Report

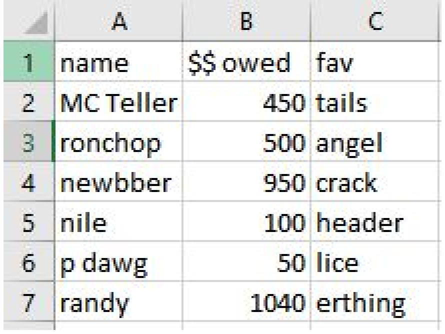
1. **What identifying information did you find on the hard drive to help determine the owner or user of the computer? Does the computer appear to have used by Perry Winkler?**

There is a username called “Perry” on the second partition of the disk. The name of the computer is “PERRYWINKLER-PC.” The system appears to in the Eastern time zone which matches up with this being an LMPD investigation (System Hive). “Perry” is also listed as the registered owner in the Software Hive of the Registry. All of these pieces of evidence suggest that the owner or user of this machine was Perry Winkler.

2. **Is there any evidence on the computer that the user may have been associated with drugs or other illegal activities?**

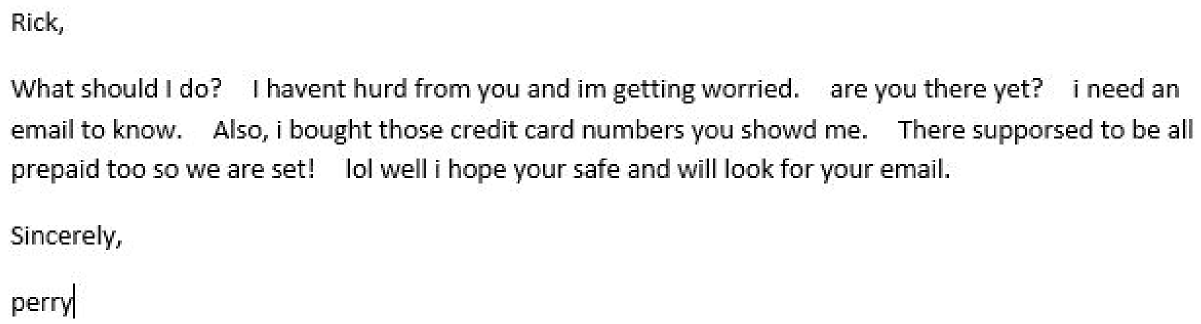
There are three pictures of firearms and a picture of a car located in the Recycle Bin for the Perry user account. It also appears as though he searched in the address bar of his browser for “how to skim credit cards” (Autopsy Web History). There is another picture called “in my dreams.jpg” on Perry’s Desktop, which is a picture of a firearm as well. This is complemented by the “the one.jpg” file that is a picture of a sports car. While these images are not directly related to illegal activity, they could serve as condemning when combined with other images and evidence, such as images of drugs.

There is also a picture labeled cc.jpg, which is an image of credit cards, da stuff.jpg, which is a picture of what appears to be a bag containing marijuana. The mike’s desk.jpg file located in the same folder, has is another image of what appears to be marijuana accompanied by a large amount of money. In the Documents folder of the Perry User account there is a file labeled Book2.xlsx. It is a spreadsheet with what appears to be customers, their respective money owed, and drug preference of choice.



	A	B	C
1	name	$$ owed	fav
2	MC Teller	450	tails
3	ronchop	500	angel
4	newbber	950	crack
5	nile	100	header
6	p dawg	50	lice
7	randy	1040	erthing

Additionally this message was found, indicating potential purchasing of stolen credit cards:



Rick,

What should I do? I havent hurd from you and im getting worried. are you there yet? i need an email to know. Also, i bought those credit card numbers you showd me. There supporsed to be all prepaid too so we are set! lol well i hope your safe and will look for your email.

Sincerely,

perry

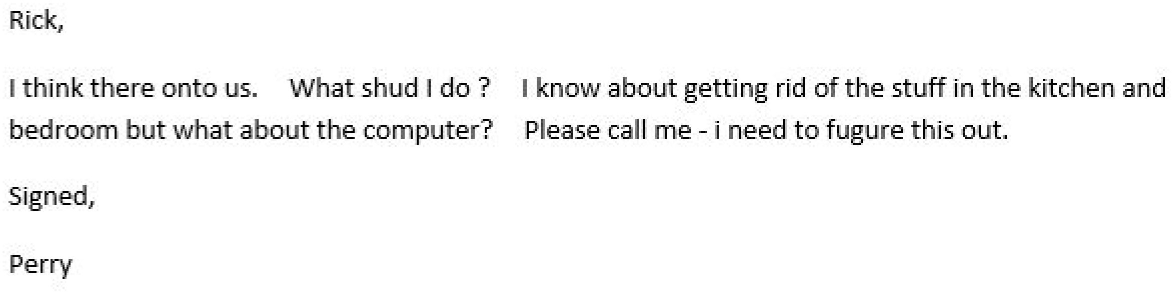
All of these items of evidence either directly proves or tangentially supports the notion that Perry, and potentially others, are engaged in illegal activity.

3. Is there any evidence that the user may have been trying to cover their tracks or delete evidence from the computer?

There is a Tor browser LNK file which could mean that Perry is attempting to cover up his tracks by using a browser that runs communications through a network of relays around the globe (LNK file). There is also a program called sdelete where it allows the user to securely delete files (LNK). In the AppData folder, there is data for a program called Eraser 6 that removes sensitive data from the hard drive by overriding it several times (LNK, JMP, Prefetch files). In the Software\Microsoft\Windows\CurrentVersion\Run key, it shows that at restart, the Eraser.exe program is run which indicates that the suspect is attempting to erase evidence. Additionally, Dropbox is also being run at startup.

The USBStor registry key lists some devices, but they all have DeviceHackFlags set instead of the standard information stored there, which is an indication of a potential virus, or that the user (or something else) attempted to write-block the connected devices, potentially in an attempt to hide information about the connected USB devices. The Tor Browser was run a single time, perhaps to do some encrypted browsing of sensitive webpages (Prefetch files). It was last ran at 1/15/2016 9:20:41 PM. ERASER.EXE was ran 5 times, indicating that it was potentially used to securely delete sensitive information (Prefetch files). It was last ran at 2/28/2016 3:47:04 PM. Additionally, Eraser shows up as an installed program on the system (Autopsy). Eraser was installed on 2/21/2016 5:34:22.

In Perry\Documents there is a file labeled Letter.rtf which contains this content:



Rick,

I think there onto us.   What shud I do ?   I know about getting rid of the stuff in the kitchen and bedroom but what about the computer?   Please call me - i need to fugure this out.

Signed,

Perry

This indicates that the suspect might have destroyed certain incriminating evidence. Additionally, in the web history for the Perry User account, there are several searches indicating that whoever was using the machine was attempting to cover their tracks, searching for things like “how to get rid of evidence”, “get rid of files”, “sdelete”, “how to get rid of computer evidence”, “evidence eliminator”. There are other suspicious searches such as “how to batch script”, “what is a batch file”, and “how to set up scheduled task” (TypedURLs, Autopsy). There are other potentially incriminating searches such as “remove traces activity computer” and “hide evidence on a computer”.

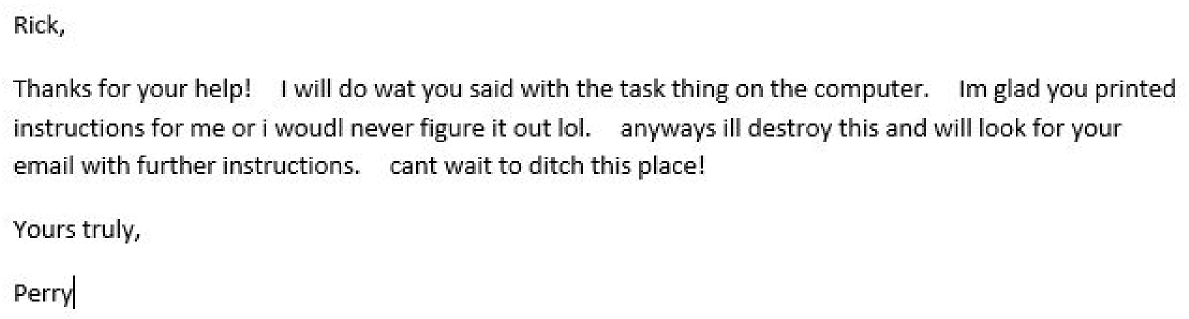
There is also evidence of the downloaded SDelete.zip from download.sysinternals.com/files/SDelete.zip, looking up batch file scripting, accessing answers to questions such as “whats the best way to get rid of all evidence on my computer” on the question site Quora, and “how remove traces activity computer” on the tutorial site eHow. There is also evidence of the suspect downloading Tor, eraser, and evidence eliminator, as well as dropbox (autopsy web searches and history). Dropbox could have been used to upload and transfer sensitive files. The user was also browsing forensics forums, trying to deal with issues such as suspects running CCleaner to hide evidence at www.magnetforensics.com/computer-forensics/oh-no-the-suspect-ran-ccleaner-to-get-rid-of-the-evidence/&rct=j&frm=1&q=&esrc=s&sa=U&ved=0ahUKEwj88Ky1hsvLAhVosoMKHamBDv8QFgghMAI&usg=AFQjCNEQOdDKK5wb8hbWq5iGae3eGIKhqQ.

It also appears the user had the allin1convert toolbar installed, which is a known browser-jacking piece of malware.

When examining the scheduled tasks on the machine, one labeled “delete” is present. It runs a batch file called delet.bat located in C:\Windows\SDelete. The author of the task is PERRYWINKLER-PC\Perry, and it is enabled to fire on windows Event ID=4625, which is the event ID associated with failed login attempts. The delete.bat file associated with this event has a single command line of “sdelete -qrsz c:\”. This launches the sdelete.exe in C:\Windows\SDelete with the flags -qrsz specifying the c drive. The flags set the .exe to not print any errors, recurse subdirectories (meaning that the secure delete is ran on every folder and subfolder on the specified drive), and to allow zero free space. Sdelete is an application that can securely remove files from computers, making them difficult to recover by overwriting and renaming files and their associated clusters up to 26 times, while at the same time overwriting unallocated free space. Essentially if someone fails to login, the contents of the C: drive are erased.

There are several image files that were carved by autopsy that seems to indicate that the user was following a guide with several steps to help cover their tracks and to provide anonymity. Identified as, f0239048.jpg, f0239328.jpg, f0238688.jpg, f0243536.jpg, f0243936.jpg, f0244360.jpg, the images appear to give instructions on how to things like download the Tor browser, use vanish.org, and send anonymous emails through the site http://anonymouse.org. Many of these have large red arrows indicating that the images came from a wikihow guide.

The following message, located at Perry\Documents\Letter2.rtf contains this text:



Rick,

Thanks for your help!   I will do wat you said with the task thing on the computer.   Im glad you printed instructions for me or i woudl never figure it out lol.   anyways ill destroy this and will look for your email with further instructions.   cant wait to ditch this place!

Yours truly,

Perry

This could indicate the suspect was working with someone named Rick, and was instructed by this person on how to delete evidence. Several other suspicious messages beginning with ‘Letter’, such as Perry\Users\Letter3.rtf, are addressed to ‘Rick’, and there are several other items of evidence that link Perry with someone named Rick Shoner.

All of these pieces of evidence serve to thoroughly support the notion that the user was attempting to cover their tracks, and to delete/obfuscate data.

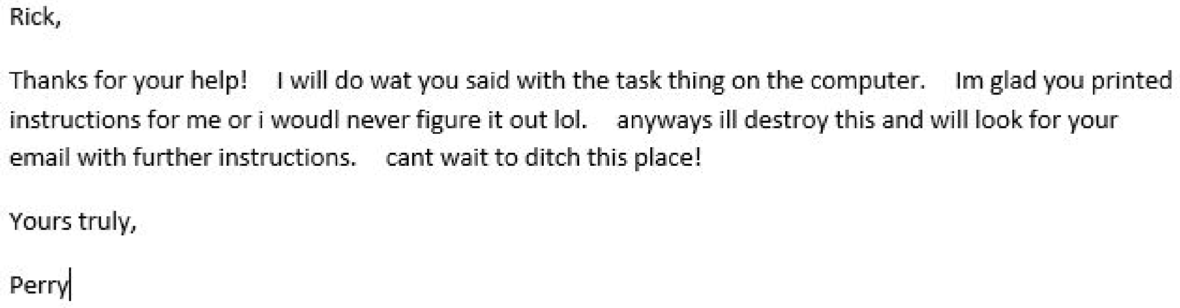
4. Can you identify any additional items (such as USB devices) that may contain pertinent evidence? If so, what are they? Include as much identifying information about each device as possible.

A user appears to have attached an E: drive to the machine which classified as a removable storage media (LNK file). This is corroborated by several other pieces of evidences, such as the presence of the E: drive in ShellBags.

From event viewer we discovered that two USB devices have been connected to the system, one Sandisk Cruzer with a serial number of 20035001811625714CA7&0 and a Kingston with a serial number of 0013729B678DEB20C51F0216&0. Unfortunately, in the registry the EMDMgmt and USBStor keys did not contain any helpful data. EMDMgmt was empty, and USBStor lists some devices, but they all have DeviceHackFlags set instead of the standard information stored there, which is an indication of a potential virus, or that the user (or something else) attempted to write-block the connected devices. The E: drive appears to have contained files car1.jpg, car2.jpg, and Mike’s Desk.jpg, which appears to be of marijuana. Unfortunately we were unable to link the E: drive with a specific removable device.

5. Is there any evidence on the computer that the user may have been planning to go on the run? If so, can you determine where the user was planning to go? a. If the user was planning to run, is there evidence that anyone might be traveling with them? If so, can you determine the identity of the accomplice(s)?

We found the following message in the Perry User account’s recycle bin folder. It was originally located at C:\Users\Perry\Documents\Letter2.rtf. It suggests that Perry was working with someone named Rick, and that they were both planning to go somewhere (Recycle Bin):



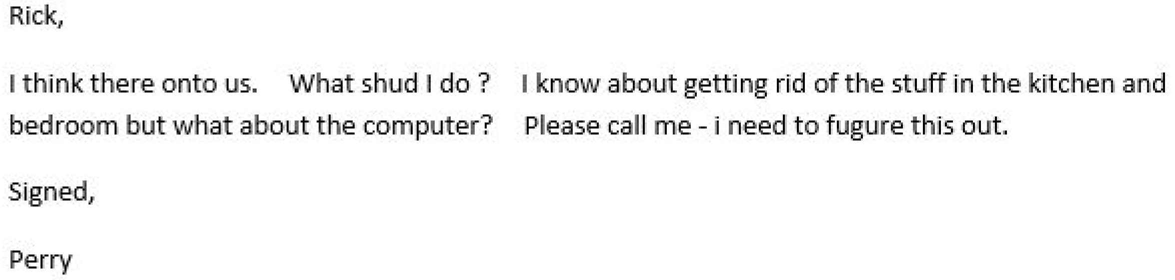
Rick,

Thanks for your help! I will do wat you said with the task thing on the computer. Im glad you printed instructions for me or i woudl never figure it out lol. anyways ill destroy this and will look for your email with further instructions. cant wait to ditch this place!

Yours truly,

Perry

The following message, located at Perry\Documents\Letter.rtf contains this message, which is also suspicious:



Rick,

I think there onto us. What shud I do ? I know about getting rid of the stuff in the kitchen and bedroom but what about the computer? Please call me - i need to fugure this out.

Signed,

Perry

This could indicate the suspect was working with someone named Rick, and was instructed by that person on how to cover up evidence. Several other suspicious messages beginning with ‘Letter’, such as Perry\Users\Letter3.rtf, are addressed to ‘Rick’.

Additionally, we found a picture in Users\Perry\Documents\Nice labeled iguazu-falls.jpg. This is an area located in Argentina, on the border with Brazil, potentially the location the suspect might be planning on escaping to in order to escape potential legal prosecution.It also appears as though Perry visited southwest.com which is the website for the airline of the same name (typedURLs).

Through file carving via Autopsy, we discovered a recoverable .mobx email file named f0252768.mbox which contained the following email, with the subject line “it’s time”:

“I finally made it here. I'm using the hotel lobby computer so this can’t be traced back to me. I'll wire the funds to your western union tomorrow. get rid of the evidence and get on united flight we talked about. see you soon.”

The file metadata indicated an original author of P Dawg, with the email address rickyboy579@aol.com. It was sent at 2016-02-28T14:08:16 to Perry Winkler, with the email address perrywin232k@aol.com. Other interesting metadata includes the following:

Message:Raw-Header:Reply-To: "Rick Shoner" <rickyboy579@aol.com>
Message:Raw-Header:X-From: Rick Shoner
Message:Raw-Header:X-To: Perry Winkler

This serves as evidence that Rick Shoner and Perry Winkler trying to avoid detection and destroying evidence, while taking a United Airline flight, as well as money transfers via Western Union. Additionally, the email header revealed a originating IP address of 186.210.54.196, which is registered in Brazil, and apparently owned by Algar Telecom. The secondary server which received the email is at 74.124.68.45, which is registered in Anchorage, Alaska, 99503. This could mean that Rick is in Brazil and is wiring money to Perry in Alaska, and they plan to meet somewhere else, via the united flight. Additionally, the message at Perry\Documents\Letter3.rtf indicates that Perry is waiting for contact and movement from Rick.

There is also a rick.jpeg file in the Perry User Account Pictures folder, which is a picture of Doc Brown, a popular character from the famous 1985 science fiction film *Back to the Future*. In terms of other potential accomplishes, there is a contact file for someone named Mary Reister that was deleted (Recycle Bin), indicating an email address of mreister@gmail.com. There are also a file(s) labeled Rick Shoner.contact that existed at C:\Users\Perry\Documents and C:\Users\Perry\Contacts, as well as a file named Perry.Contact located at C:\Users\Perry\Contacts. (LNK / JMP Lists). The Rick Shoner.contacts lists an email address of rickboy579@aol.com , while Perry.Contact contains nothing other than the name Perry. There is another contact located at In Perry\Contacts called Larry Spitz.contact. It indicates that Larry Spitz has an email address of spitzmeister@rocketmail.com. These contacts could reveal potential accomplices or additional leads.

6. What other evidence did you locate on the computer that may assist LMPD in its investigation (e.g. files that point to additional leads, accomplices, or any other activity not targeted by the initial investigation)?

The operating system is Windows 7 professional service pack 1, installed on Fri, 15 Jan 2016 21:06:55 (Software Hive). It appears that there is not important identifying evidence in the EMDmanagement or USBStor key (Registry). The admin logon has a login count of 6. And the "perry" account has a logon count of 9. The password hint for the "Perry" is "it's your name, idiot" implying that the user account's password is either "Perry" or "Winkler."

Upon reconstructing the users EFS encryption key using a tool called mimikatz, it was revealed that the password is 'perry', which is useful in potentially avoiding the C: drive wiping event of SDelete. We recreated the EFS certificate in an attempt to decrypt and open the plan.zip file in Perry\Documents\email, and while the certificate was successfully recreated, it appears the zip file is otherwise corrupted and unopenable.Given its location and name, this may have contained incriminating evidence worthy of investigation.

It looks as though Perry used Snipping tool and MS Paint 10 times each. He used a strangely named program called xpsrchvw.exe 7 times and ran RDP 6 times. The Tor browser installation file was certainly run.It appears as though he last interacted with Tor on 1/15/2016

(Shellbags explorer). And AIM was installed which he used twice. It looks like Eraser was run 5 times and Task Scheduler was run 1 time which could mean he was scheduling file erasures regularly. (USRAssist) It looks as he recently accessed the program known as Sdelete which able to securely wipe hard disks. He downloaded a zip file titled sdelete and extracted the contents (Shellbags). It appears as though AOL Instant Messenger is scheduled to start at boot (NTUser Run).

Programs that have been run on the machine that appear suspicious and could require further investigation include 41470975[1].EXE which was run a single time. It is a strange and unknown program name, and it being run only once is an indicator of potentially malicious and suspicious activity according to the principle of least frequency of occurrence. (Prefetch).

There are Canon logo images on the volume, indicating that that may be the type of camera used to take some of the picture located on the system.

There is also an image of what appears to be a can of prego pasta sauce in the back component of a toilet, dated 05/05/2007 at \Perry\Documents\100_6317.jpg. This is an odd thing, which may be worthy of investigation.