

Contemporaneous Notes

Note: This document forms the scope of your investigation, the Officer In Charge wants these areas examined. If you decide to omit a process, then you should provide your reasons for doing so here and in your statement. You may add additional rows, as appropriate.

Examiner	Sahifa Syed	Exam commenced	19/10/2023 – 11/01/2024
Other relevant information	-	Software used, versions and licensing	Encase Autopsy

Action	Done?	Date	Time	Notes
Load case and verify image	Yes, done	23/10/2023	10:00am	I have been asked to load the case HunterXP into encase and verify the image. To do this I downloaded the HunterXP image from the sway. Once that was completed I loaded the case into encase and verified the image. The image verified successfully without any errors and the acquisition and verification values matched accurately. (refer to figure 1 in the appendix below) It COMPLETELY verified with 0 errors. Acquisition MD5 dfcfe9ab9a60c6ad4a314656b687226b Verification MD5 dfcfe9ab9a60c6ad4a314656b687226b
Load Case into second forensic tool for dual verification of at least 2 key artefacts, evidence items	Yes, done	09/11/2023	03:14pm	I have been asked to load the case into another forensic tool for dual verification comparing two key artefacts (evidence items). AFTER successfully loading the case into encase (forensic tool 1) , I chose autopsy for my second forensic tool . To do this I downloaded autopsy from the sway and loaded the case successfully. For dual verification I used an image as my first key artefact . I compared the same image in both autopsy and encase and all the values and dates matched .

Action	Done?	Date	Time	Notes
				<p>Found Image 101-0188_IMG.JPG in both encase and autopsy. The MD5 value of the image is 5ead9d1c32a5deb91600b0783b7b4699. The image was last accessed 04/06/02 19:04:14 as stated in the image. (refer to figure 2 in the appendix below)</p> <p>For my second key artefact I chose to compare a document on encase and autopsy which consists of banking information. The values and dates once again matched on both forensic tools. The MD5 value of the document is 2f3bf3218f33863fcb5990f64fb137ee4. The image was last accessed 03/06/02 16:09:36 as stated in the image. (refer to figure 3 in the appendix below)</p>
Time Zone Adjusted? Report Time Zone used for Analysis.	Yes, done	25/10/20 23	02:00pm	I have been asked to adjust the time zone settings. In order to do this, I went to the system file at C:\WINDOWS\system32\config\system , and I mounted it successfully by accessing the file structures in the entries tab. A green plus icon in the figure below illustrates this process (figure 4). I then performed a right-click on the Hunter XP picture folder and selected the modify Time Zone settings key (figure 5). Before making any changes, I first made sure to confirm and verify the current settings of the time zones. This then resulted in the time zone being changed from Dublin to Central Time (US and Canada) (figure 6). After making this modification, I verified the timestamps so that every piece of evidence was shown in Central Time (figure 7). This was done in order to preserve consistency and relevance to the case. The modifications were appropriately implemented.
Recover lost folders (NTFS,FAT16&32)	Yes, done	26/10/20 23	04:15pm	I was asked to recover lost folders in encase and to simultaneously check if the process ran successfully by using autopsy. To do this I selected the evidence processor in encase. Once that opened up, I clicked the hyper link for the recover lost folders section and checked in the box called 'reconstruct folder structure'. After checking in the hyperlink, I checked in the main recovery folders box and selected OK (figure 8) . Once verifying that the folders had been recovered correctly in Encase, I used Autopsy to perform a second examination to make sure everything about the folders was in working order (refer to figure 9 in the appendix).
Mount archives; zip, thumbs.db, etc.	Yes, done	21/11/20 23	03:34pm	I was asked to mount archive files which consists of zip files, thumbs and more. I opened up hunter XP on encase and processed the evidence. Once the evidence was processed and the evidence processor appeared. I checked in the boxes to

Action	Done?	Date	Time	Notes
				expand the compound files to enable access for all file types. This process has ran successfully as everything within encase is now decompressed (see figure 10).
File signature analysis (any interesting file mismatch?); Compute hash values (enable entropy computation)	Yes, done	20/11/2023	01:55pm	I have been asked to run the process of file signature analysis and examine the results it produces, compute hash values by enabling entropy as well as to record my observations if I found any alias or bad signature files. To do this I loaded and processed the evidence processor. Once that was complete, I carefully checked that the MD5, entropy, and SHA values were enabled and accurate (see figure 11). <i>It is important to mention that the SHA value was not initially given in Encase when the case was first uploaded. This absence of the SHA value persisted throughout the entire investigation process.</i> Once all of the above was performed correctly, I then began to look for alias and bad signature files and after an in-depth search, I found internet jpeg files which were considered as false positives meaning they were executable (see figure 12).
Internet History, favourites, etc. Other browsers?	Yes, done	20/11/2023	04:11pm	I have been asked to recover and examine the internet history/web browser data contained within the device. To do this I used the 'Evidence Processor' within EnCase. I first enabled the find internet artefacts options within the evidence processor (figure 13). The process had ran successfully as there was evidence to be examined in the records tab. On reviewing the extracted internet history I was able to find notable evidence that was related to stalking. There is evidence that a user has typed into a web browser searches (URLS) related to stalking (refer to figure 14).
Emails, local and web-based.	Yes, done	23/11/2023	03:00pm	I have been asked to examine different types of emails (local and web-based) using Encase. I utilized the 'evidence processor' and selected the find emails option. Once the process completed, options were shown and I selected a couple which I then chose to extract (see figures 15 and 16). I then went to the 'Records tab' to thoroughly examine emails. I found some fishy deleted emails, and I've displayed it in the appendix below (refer to figure 17). During this thorough examination I found an array of emails. These emails were exchanged between various individuals and they were closely related to the stalking activity under investigation. The content of these messages included the transmission of pictures of a woman getting out of her car, holding a letter and going to a post office and through the windows reflection, you can see a man with a camera. The woman in the pictures seems to be unaware of the pictures being taken of her. This finding was vital to building a clearer understanding of the case (figure 17.1).

Action	Done?	Date	Time	Notes
Retrieve operating system information, accounts information, software, time zone information etc.).	Yes, done	30/11/2023	01:44pm	I have been asked to retrieve operating system information which includes information retrieved from accounts, software, time zone etc. To do this I processed and loaded the evidence processor. I then checked into the box for the system info parser and ran the process. Once the process ran successfully, I navigated to the view tab and then went into records for a more thorough examination of the results. This resulted in me finding information from various registry keys which included information about the time zone, service artefacts. This vital information has been displayed in the appendix for reference.
Timeline analysis- Note date of last activity on the computer. System profiling.	Yes, done	30/11/2023	01:44pm	I was asked to examine and analyse the timeline data within encase and record the install and the shutdown times on the device. I done this by using the evidence processor and selecting the system info parser. After the process had ran successfully I utilized the registry records to determine the installation and last shutdown dates and times of when the computer was in use (as shown in figure 25). I also managed to find time zone information within the registry records (refer to figure 26). It is essential to remember and mention that while there is a recorded shutdown time as stated in the appendix below, the computer was not shutdown correctly. This implies that the shutdown time is therefore unreliable and there is a possibility of file activity after the shutdown time meaning the computer could have been in use after the last recorded shutdown date.
Registry analysis and Registry protected area	Yes, done	10/12/2023	05:50pm	I was asked to carry out a thorough analysis within the registry and its protected area. To do this I used the evidence processor in Encase and selected the system information parser. Upon successful completion of this initial step, I examined the registry which consists of a number of 'hive' files. These hive files: SOFTWARE, SYSTEM, SAM, SECURITY were already analysed before. I have used the tools registry viewer as well as RegRipper to analyse these files. <u>[refer to the notes under the blue heading Recover log-on passwords]</u> The Sam file Stores users' passwords in a hashed format, the system and security files aided me in determining that the device was not password protected and the software file enabled me to find out Operating System information (refer to figure 53 and 54 in the appendix below). This was all important information to know beforehand in order to proceed with this investigation further. For the registry protected area I manged to located and carefully examine various NTUSER.dat files. To analyse these files more accurately, I utilized

Action	Done?	Date	Time	Notes
				RegRipper, a well-known tool in digital forensics for parsing registry information. With the results from RegRipper, I was able to find relevant information about the LastWrite Time, LastVisitedMRU , MRU list and the Last directory . The specifics of this thorough analysis are documented in the provided appendix below (figure 28).
Link files and Recycle Bin	Yes, done	07/12/2023	01:30pm	<p>I was asked to identify .LNK files and view the recycle bins and record anything relevant to it. To do this I used the "Evidence Processor" within EnCase and processed the 'windows artefact parser' making sure that all the correct settings within the hyperlink were selected. After this process was successfully finished, I examined the files under the 'records' tab (see figure 29). Following that, I processed the case analyser, went into the software usage section and found the executable .LNK files. I located a number of lnk files here and saved the ones that were relevant to the case (figure 30).</p> <p>I took a few actions in an attempt to make sure the Recycle Bin files were intact and to make sure there had been no bypass. Initially, I navigated to c:\WINDOWS\System32\config\software, where the software file was successfully mounted. I expanded the folders: Microsoft ,Windows, Current Version, Explorer, Bitbucket to access the files inside. I found the 'nuke on delete' setting there, and its hex value of 00 00 00 00 meant that there had been no bypass and the files were correct and undamaged. <i>I have also mentioned this in the appendix (figure 31)</i>.</p> <p>After that, I went back to the case analyser and discovered, among the files in the Recycle Bin, a noteworthy file called "Sabrina Dewercs" (figure 32).</p>
Instant Messaging clients	Yes, done	30/11/2023	01:44pm	I was asked to examine instant messaging clients. To do this I used the evidence processor. Within the evidence processor, I expanded the folder 'modules' and selected the IM Parser (see figure 33). After that, I executed the process, and it ran successfully. I navigated to the view tab and then went into records for a more thorough examination of the results. As a result, multiple messages that seemed to be of relevance to the case were found. I also looked into different chats. For detailed documentation and conclusions, please refer to the appendix below in figures 34, 35 and 36 .

Action	Done?	Date	Time	Notes
Clean-up/Wiping utilities. Check log files. Anything used?	Yes, done	06/12/2023	12:00pm	<p>I have been asked to determine if any clean/wiping utility has been used by examining relevant program files, .log files , event logs and possibly examine the prefetch folder to see if a relevant program has been run. To do this I navigated to the 'records' tab and selected the 'Windows event log parser'. Within there, I then looked into System Event Log in which I found important information relevant to the case. This specific information linked to a source under the name "Remote Access", I've displayed the specifics in the appendix below (see figure 37).</p> <p>Furthermore, I 'green plated' the Hunter XP, and this led me into locating and examining relevant .log files under the folder called outlook express as well as executable files under the prefetch folder and the system32 folder. (Refer to figures 38, 39, 40 in the appendix below). These files contained valuable information relevant to the case related clean-up utilities as well as permissions within it relating to a user account.</p>
External drives; Network connections	Yes, done	07/12/2023	2:08pm	<p>I have been asked to examine the relevant registry artefacts to identify what external devices have been attached to the computer. To do this I used the evidence processor. Within the evidence processor I expanded the module folder, selected the system info parser option and managed to run it successfully. After execution of the system info parser, I examined the results by navigating to the 'records tab' (figure 41) and under the Hunter XP section, I found USB drives which are considered as external drives to be attached to the computer. Figure 42 in the appendix below consists of specific information about the USB drive such as disk name and serial number, etc.</p>
Perform data carving	Yes, done	30/11/2023	4:41pm	<p>I have been asked to perform data carving within encase. To do this I used the evidence processor. Within the evidence processor, I expanded the folder 'modules' and selected the File Carver Option (see figures 43 and 44). After that, I executed the process, and it ran successfully. I carefully examined the results and amongst the findings, I found two specific files that was important to the case. It included mail sent from the device to the parent of the individual as it referred to the term 'daughter' more than once a well as images being sent of a woman who does not seem to know that someone is taking pictures of her.</p> <p>The specifics are included in the appendix below (see figures 45, 46 and 47).</p>

Action	Done?	Date	Time	Notes
Run relevant keyword searches; Did you index the evidence file?	Yes, done	23/11/2 023	1:48pm	<p>I was asked to run keyword searches relevant to the case by Indexing the evidence files and then examining the end results. To do this I indexed the case by using the evidence processor (figure 49). Once the case was indexed successfully, the next step was to expand compound files which was already done (see figure 10). I then began my keyword search specifically using terminology related to stalking (stalk, stalker etc..). This search resulted in various files appearing that could be evidence related to the case (see figures 48 and 50).</p> <p>I then performed a raw search (figures 51 and 52). For this part there is no need to process the evidence. I used the GREP function to zero in on specific terminology – in this case, the word "dad" in the Hunter Pics Folder. This search resulted in me finding useful information relevant to the case.</p>
Recover Log-on passwords – use SAMInside/Ophcrack/Encase	Yes, done	16/11/2 023	4:53pm	I was asked to recover log-on passwords and determine if the device was protected by a password or not. To do this I went to encase and selected the following directory C: \WINDOWS\system32\config\system. I selected the files SAM,SYSTEM,SECURITY,SOFTWARE and copied the files into the registry viewer in order to view an analyse them (figure 53). Once that was successfully completed I downloaded a tool called 'saminside' from the sway and opened up the files SYSTEM and SECURITY which led me into finding out that this device was not password protected (figure 54).
Examine different file types: Export doc/office and exe files; look at Metadata if required	Yes, done	14/12/2 023	02:00pm	I have been asked to examine and document different file types most relevant to the case as well as the meta data of notable files. To do this I utilized the filter option on encase. I filtered my selection by finding files based on their extensions (figure 55) . I managed to find a jpeg file and two executable files which seemed of significance to the case. I also bookmarked these files. More information about these files, their relevance, and their context in the investigation can be found in the appendix below (refer to figure 56) as well as the SS2 :evidence record provided in separate document.
Encryption, Steganalysis (any indications? Entropy or Autopsy can be used)	Yes, done	07/12/2 023	5:00pm	<p>Jay had given me specific instructions to identify and determine for encryption using encase and to not perform a steganalysis during this investigation as we have not yet covered it in the curriculum.</p> <p>Initially, I made sure to check that the hash analysis option and within it the entropy option has been enabled. This was done by loading the evidence</p>

Action	Done?	Date	Time	Notes
				<p>processor, selecting the hash analysis hyperlink and finally checking in the box to enable the entropy. This process was already done in one of the earlier processes (refer to figure 11). I then ‘green plated’ Hunter XP to simplify my search and the results of this process and analysis led to a display of a column consisting of multiple entropy values dedicated to files within encase. The process of entropy analysis involves evaluating the degree of randomness present in data in which Encase assigns an entropy value to each folder and file. Generally, a higher entropy value indicates a greater probability of encryption. More specifically, files with entropy values ranging from 6 to 8 are regarded as strong contenders for encryption. In my analysis, I looked for files which had the entropy of the first set till 7 values , as they usually offer the most dependable clues regarding encryption if there is no file signature on them.</p> <p>Once I found the files with the highest entropy values, I conducted a thorough examination of their hex representation and it seemed messy and random. The results of this analysis, including specifics about the files that have the highest entropy levels, have been recorded and added to the appendix for a thorough and targeted investigation of any possible encryption within the dataset. (refer to figure 57)</p> <p>Upon closer inspection, I managed to identify an MZ executable file, which had a high entropy value of 7.9867.. , was a false positive as it turned out to be an archive file (refer to figure 58).</p>
Print artefacts	Yes, done	21/11/2023	4:25pm	I was asked to find print artefacts in encase. To do this I chose to manually search for .SPL and .SHD files when the automated process failed to locate them. I went to the printers directory located at C:\WINDOWS\system32\spool\printers and within there were a range of .SPL and .SHD files. Starting with the .SPL files, I began my search for the EMF marker. This was done by viewing each of the files Hex view. Once the EMF marker was located (see figure 59) . With the help of the GPS, I then managed to select the 41 bytes that came before the EMF sequence (figure 60). By doing so, I successfully identified a notable document that had been sent to the printer which was indicated by the file 00018.SPL. This notable file was relevant to the case as it consisted of an email within it a picture of a female and the subject titled: “Your daughters safety depends on this” (figure 61) . I’ve also bookmarked this piece of information within my evidence record (page 16)

Action	Done?	Date	Time	Notes
				<i>however when the evidence record was extracted out of encase, it repeatedly blocked out the text but kept the image (Jay said I should just mention this bit in my notes). Additionally, I investigated a .SHD file in the same directory within Encase. This also seemed relevant to the case as it held information about the type of printer in use (figure 62).</i>
CD/DVD burning apps; check log files	Yes, done	07/12/2 023	4:41pm	I was asked to see if CD/DVD burning apps were used by looking for relevant program files and relevant .log files and to examine the prefetch files to see if a relevant program has been run. To do this I began by green plating the Hunter XP case in the evidence tab on encase. This helps me in selecting everything at once and it enables me to simplify my selection by marking all the relevant items in the folder. I then began my search for CD related log files by looking through the hex data. After carefully examining multiple files and the hex data they contain. I came across one specific file that seemed of great relevance to the case. The file I found is called Hunter.log, within its hex data tab I found a conversation between two people discussing matters related to money, this could be seen as evidence to the case (refer to figure 63).
Validate evidence integrity at the end of the examination	Yes, done	15/12/2 023	09:11am	I have been asked to validate evidence integrity at the end of the examination. To do this I went to the HunterXP case and viewed the fields tab. The evidence had been verified successfully without any errors and the acquisition and verification values matched accurately. (refer to figure 64 in the appendix below) It COMPLETELY verified with 0 errors.

Additional Notes/Artefacts Examined:

Performing Bypass for Recycle bin	Yes, done.	07/12/2 023	01:30pm	I took a few actions in an attempt to make sure the Recycle Bin files were intact and to make sure there had been no bypass. Initially, I navigated to c:\WINDOWS\System32\config\software, where the software file was successfully mounted. I expanded the folders: Microsoft ,Windows, Current Version, Explorer, Bitbucket to access the files inside. I found the 'nuke on delete' setting there, and its hex value of 00 00 00 00 meant that there had been no bypass and the files were correct and undamaged. <i>I have also mentioned this in the appendix (figure 31).</i>
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Evidence Record issue for Print Artefacts image	-	-	-	Jay asked me to mention here the issue I faced when extracting the evidence record out of encase. <i>"This notable file was relevant to the case as it consisted of an email within it a picture of a female and the subject titled: "Your daughters safety depends on this" (figure 61 in the appendix below). I've also bookmarked this piece of information within my evidence report (page 16) however when the SS2: evidence record was extracted out of encase, it repeatedly blocked out the text but kept the image "</i>
Evidence Record issue	-	-	-	Another issue that kept on repeatedly happening was the pictures of interest page. Whilst I do have pictures and they do show up on the evidence record. The record keeps on adding a blank page for it every a couple of pages in after scrolling. All the data within it is correctly extracted from encase however there are some minor issues that keep appearing that is worth mentioning, in order to avoid confusion and any misconceptions

Colour-coding Legend	Tasks
	Fundamental
	Basic
	Elementary
	Secondary
	Advanced
	Exceptional

APPENDIX

Load case and verify image:

Figure 1 :

S	File Integrity	Completely Verified, 0 Errors
↳	Acquisition MD5	dfcfe9ab9a60c6ad4a314656b687226b
↳	Verification MD5	dfcfe9ab9a60c6ad4a314656b687226b

Load case into 2nd forensic tool with dual verification:

Figure 2 :

The screenshot displays two forensic analysis environments side-by-side, both showing the same evidence file content.

Left Window (EnCase Forensic Training):

- File List:** Shows a table of files selected (3/11477). The columns include Name, File Ext, and Logical Size. Several JPEG files are listed, such as 102-0225_IMG.JPG, 102-0218_IMG.JPG, etc.
- File Details:** A detailed view for the file 101-0188_IMG.JPG shows the following properties:

Name	101-0188_IMG.JPG
File Ext	JPG
Logical Size	122,102
Category	Picture
Signature Analysis	Match
File Type	JPEG Image Non-Standard
Last Accessed	04/06/02 19:04:14
File Created	14/05/02 13:01:51
Last Written	24/04/02 15:52:00
Is Picture	•
Is Indexed	•
MDS	5ead91c32a5deb91600b0783b7b4699
SHA1	10f89d7c8ce83157d22d9e9604375bf2be66dfb
Entropy	7.3148910
Item Path	Hunter\Hunter XP\C\Documents and Settings\Bob Hunter\Local Settings\Application Data\Microsoft\CD Burning\Hunter Pics\Christina Detsiwi\101-0188_IMG.JPG
True Path	Hunter\Hunter XP\C\Documents and Settings\Bob Hunter\Local Settings\Application Data\Microsoft\CD Burning\Hunter Pics\Christina Detsiwi\101-0188_IMG.JPG
Description	File, Archive
Entry Modified	04/06/02 19:49:59
File Acquired	25/01/08 02:06:19
Initialized Size	122,102
Physical Size	122,880

Right Window (Hunter XP - Autopsy 4.21.0):

- File System Tree:** Shows the structure of the evidence file, including volumes vol1 and vol2, and various folders like Application Data, Microsoft, and CD Burning.
- Table View:** A table listing files from the evidence. The columns are Name, S, C, O, Modified Time, and Change Time. The file 101-0188_IMG.JPG is highlighted in blue.
- Metadata Panel:** Displays detailed metadata for the selected file (101-0188_IMG.JPG):

Name:	/img_Hunter XP for Dongled v6.E01/vol_vol2/Documents and Settings/Bob Hunter/Local Settings/Application Data/Microsoft/CD Burning/Hunter Pics/Christina Detsiwi/101-0188_IMG.JPG
Type:	File System
MIME Type:	image/jpeg
Size:	122102
File Name Allocation:	Allocated
Metadata Allocation:	Allocated
Modified:	2002-04-24 15:52:00 GMT-05:00
Accessed:	2002-06-04 19:04:14 GMT-05:00
Created:	2002-05-14 13:01:51 GMT-05:00
Changed:	2002-06-04 19:49:59 GMT-05:00
MD5:	5ead91c32a5deb91600b0783b7b4699
SHA-256:	36d4b546bbb72d24a9b004b553457272ff392e0edb3d8e886682036a6c7b9923
Hash Lookup Results:	UNKNOWN
Internal ID:	648
- Text Output:** A panel at the bottom titled "From The Sleuth Kit istat Tool:" contains the command used to generate the metadata.

Figure 3 :

The image shows two forensic analysis software interfaces side-by-side:

- Left Window (EnCase Forensic Training):**
 - File Explorer:** Shows a tree view of file systems, including 'Sabrina' (with 'Temporary Intern'), 'My Documents' (containing 'bob_hunter1191' folder), and various system and temporary folders.
 - Table View:** A grid showing file details for 'Banking Information.txt'. Data includes:

Name	File Ext	Logical Size
Banking Information.txt	txt	57
 - Details View:** A detailed table of file metadata for 'Banking Information.txt'.

Name	Value
Name	Banking Information.txt
File Ext	txt
Logical Size	57
Category	Document
Signature Analysis	Match
File Type	Text
Last Accessed	03/06/02 16:09:36
File Created	03/06/02 16:09:08
Last Written	03/06/02 16:09:36
Is Indexed	*
MD5	2f3bf3218f3863fc5b5990f64fb137ee4
SHA1	d39ae2fc1c5c4d2d5e9b689d4ae82647a72b81
Entropy	0.9319196
Item Path	Hunter XP\Documents and Settings\Bob Hunter\My Documents\Banking Information.txt
True Path	Hunter\Hunter XP\Documents and Settings\Bob Hunter\My Documents\Banking Information.txt
Description	File, Archive
Entry Modified	03/06/02 16:09:36
File Acquired	25/01/08 02:06:19
Initialized Size	57
Physical Size	57
Starting Extent	OC-C396150,432
File Extents	1
- Right Window (Hunter XP - Autopsy 4.21.0):**
 - File Explorer:** Shows a hierarchical tree of file systems, including 'vol1 (Unallocated: 0-62)' and 'vol2 (NTFS / exFAT (0x07): 63-3318335)'.
 - Table View:** A grid showing file details for 'Banking Information.txt'. Data includes:

Name	S	C	O	Modified Time	Change Time
Banking Information.txt	0	2002-06-03 16:09:36 GMT-05:00		2002-06-03 16:09:36 GMT-05:00	2002-06-03 16:09:36
 - Metadata View:** A detailed table of file metadata for 'Banking Information.txt'.

Name	Value
Name	/img_Hunter XP for Dongled v6.E01/vol_vol2/Documents and Settings/Bob Hunter/My Documents/Banking Information.txt
Type	File System
MIME Type	text/plain
Size	57
File Name Allocation	Allocated
Metadata Allocation	Allocated
Modified	2002-06-03 16:09:36 GMT-05:00
Accessed	2002-06-03 16:09:36 GMT-05:00
Created	2002-06-03 16:09:08 GMT-05:00
Changed	2002-06-03 16:09:36 GMT-05:00
MD5	2f3bf3218f3863fc5b5990f64fb137ee4
SHA-256	3df662d5b73081058285c24ec13344e47a0dc4ff5764641f486daac4e9a7f80
Hash Lookup Results	UNKNOWN
Internal ID	4673
 - Bottom Panel:** Displays 'From The Sleuth Kit istat Tool' and 'MFT Entry Header Values'.

Modify Time Zone Settings:

Figure 4:

	Name
1	 systemprofile
2	 system
3	 software

Figure 5:

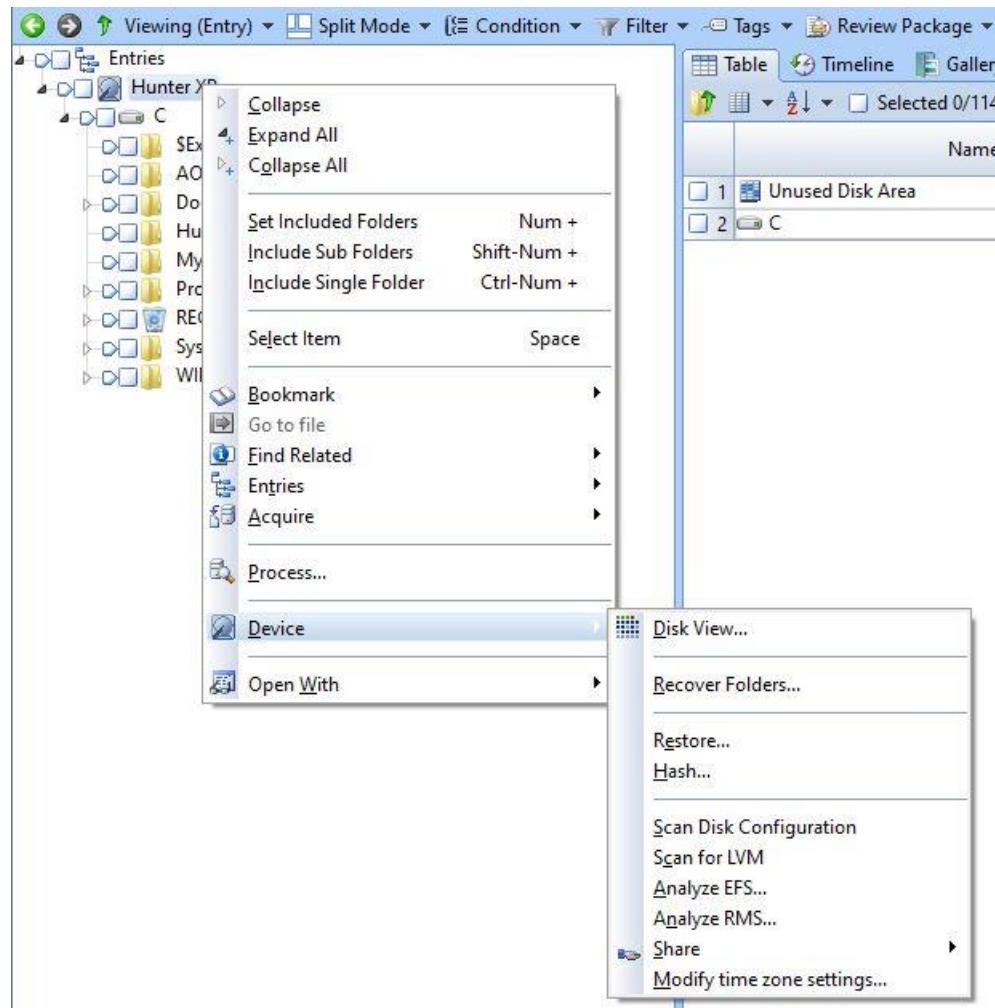


Figure 6:

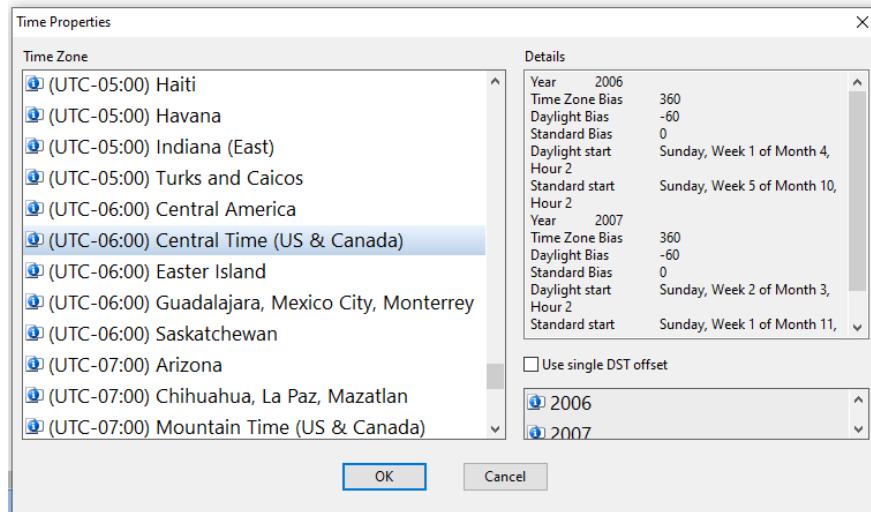
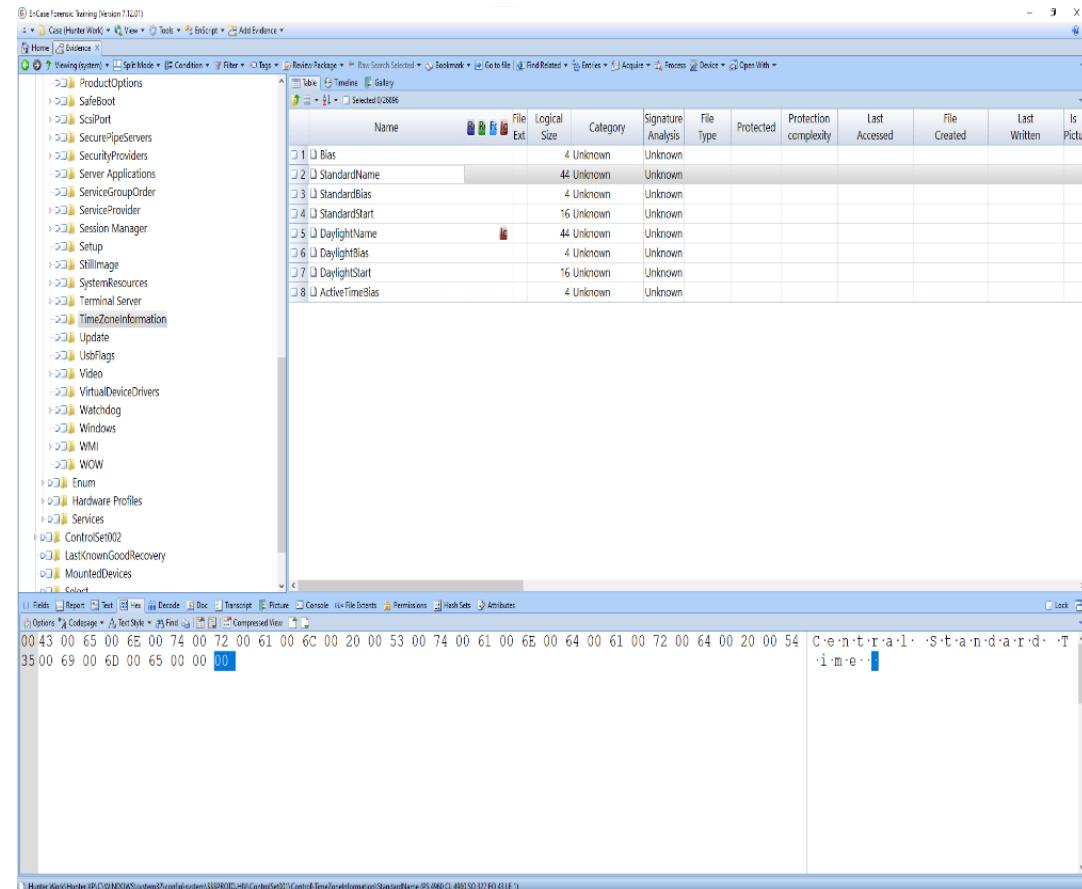


Figure 7:



Recover lost folders:

Figure 8:

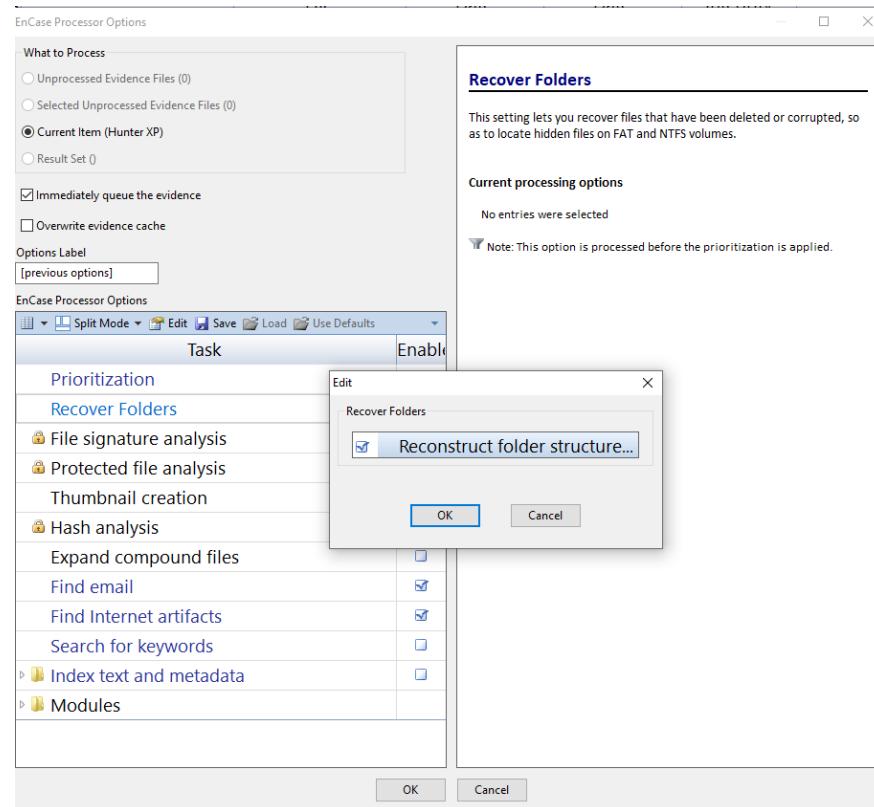


Figure 9:

The screenshot displays a digital forensic analysis interface with two main panes. The left pane shows a hierarchical tree of data sources and file systems. The right pane shows a detailed file system table and various analysis tabs.

Data Sources:

- Hunter XP for Dongled v6.E01_1 Host
 - Hunter XP for Dongled v6.E01
 - vol1 (Unallocated: 0-62)
 - vol2 (NTFS / exFAT (0x07): 63-3318335)
 - \$OrphanFiles (0)
 - \$CarvedFiles (1)
 - 1 (159)
 - f0000132.html.gz (1)
 - f0000320.html.gz (1)
 - f0000704.html.gz (1)
 - f0000820.html.gz (1)
 - f0001108.html.gz (1)
 - f0001128.html.gz (1)
 - f0001404.gz (1)
 - f0002672.html.gz (1)
 - f0003048.html.gz (1)
 - f0003540.html.gz (1)
 - f0003724.html.gz (1)
 - f0004076.html.gz (1)
 - f0004080.html.gz (1)
 - f0004204.html.gz (1)
 - f0004320.html.gz (1)
 - f0004964.html.gz (1)
 - f0005304.html.gz (1)
 - f0005480.gz (1)
 - f0005592.html.gz (1)
 - SEnter (5)
 - SUnalloc (1)
 - AOL Instant Messenger (3)
 - Documents and Settings (7)
 - All Users (9)
 - Bob Hunter (18)
 - Default User (98)
 - LocalService (8)
 - NetworkService (8)
 - Hunter Pics (2)
 - My Music (2)
 - Program Files (27)
 - RECYCLER (3)
 - System Volume Information (4)
 - WINDOWS (130)
 - vol3 (Unallocated: 3318336-8007551)

File System:

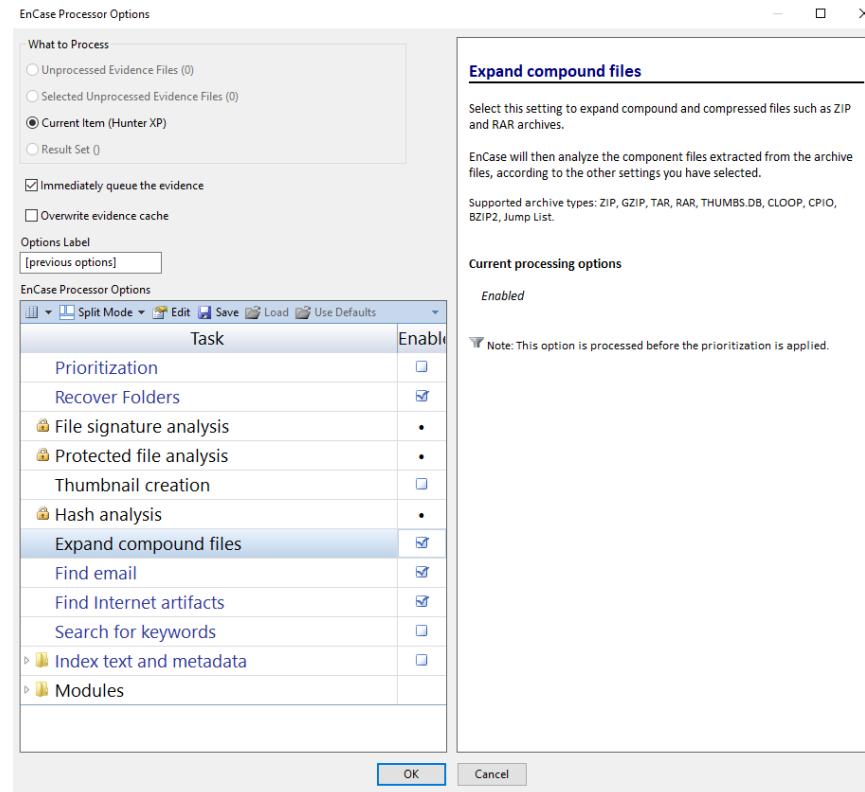
Name	S	C	O	Modified Time	Change Time	Access Time
bob hunter@anonymizer[1].txt				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
bob hunter@anonymizer[2].txt				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
bob hunter@zdnet[1].txt				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
bob hunter@scripts[2].txt				2002-03-31 08:55:06 GMT-06:00	2002-03-31 08:55:06 GMT-06:00	2002-06-04 19:34:17 GMT-0:
bob hunter@yahoo[1].txt				2002-06-03 14:11:32 GMT-05:00	2002-06-03 14:11:32 GMT-05:00	2002-06-04 18:35:56 GMT-0:
bob hunter@questionmarket[2].txt				2002-06-03 15:22:27 GMT-05:00	2002-06-03 15:22:27 GMT-05:00	2002-06-04 18:40:31 GMT-0:
102-0230_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
102-0268_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
102-0269_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
103-0380_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
103-0383_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
104-0411_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
104-0412_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00
104-0455_IMG.JPG				0000-00-00 00:00:00	0000-00-00 00:00:00	0000-00-00 00:00:00

File Views:

 - File Types
 - By Extension
 - By MIME Type
 - Deleted Files
 - File System (1978)
 - All (2137)

Mount Archives:

Figure 10:



File Signature Analysis:

Figure 11:

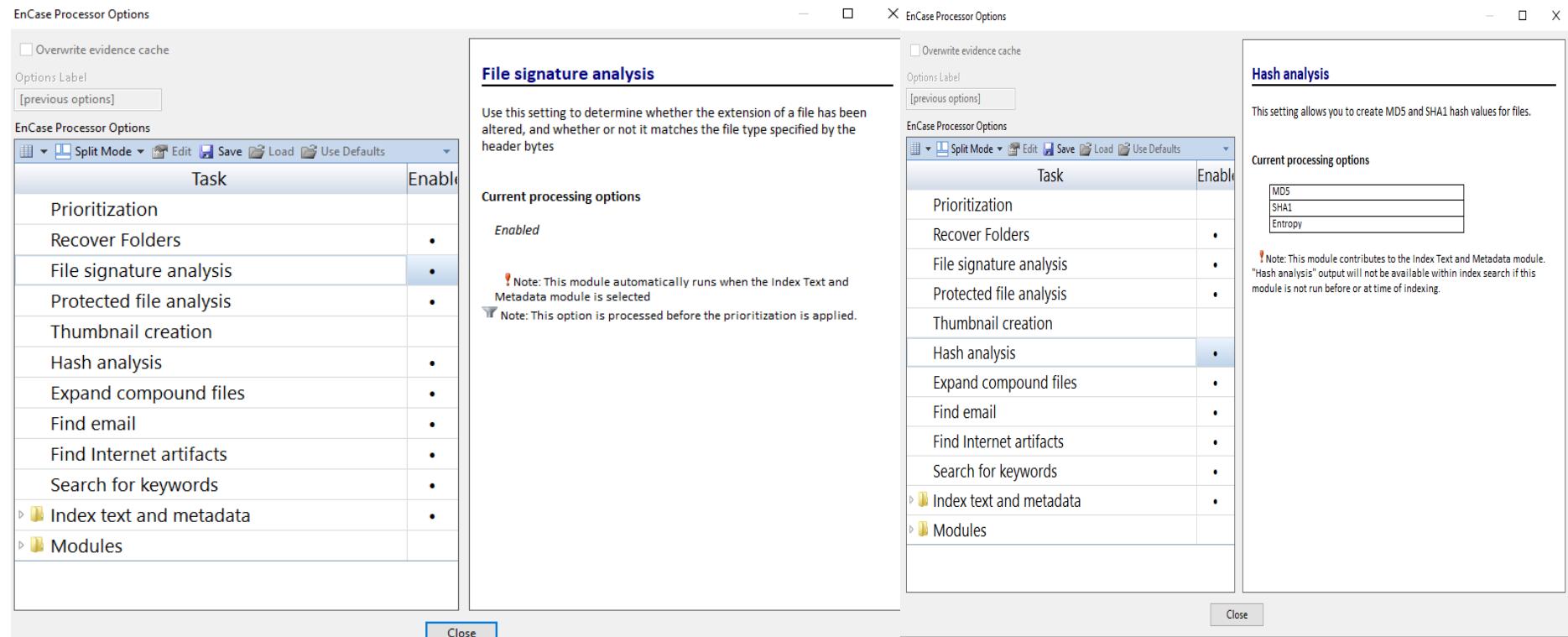


Figure 12:

EnCase Forensic Training (Version 7.12.01)

Case (Hunter) Evidence Records

Viewing [Entry] Split Mode Condition Filter Review Package Raw Search Selected Bookmark Go to file Find Related Entries Acquire Process Device Open With

Selected 0/11477

Entries Hunter XP C:\

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection Complexity	Last Accessed	Prev Crea
wbkD9.bmp	tmp	490 Windows	Match	Windows Tem...				03/06/02 12:38:13	03/06/02 12:31
wbkD6.bmp	tmp	496 Windows	Match	Windows Tem...				03/06/02 12:38:28	03/06/02 12:31
wbkD4.bmp	tmp	496 Windows	Match	Windows Tem...				03/06/02 12:38:20	03/06/02 12:31
wbkD3.bmp	tmp	411 Windows	Match	Windows Tem...				03/06/02 12:38:15	03/06/02 12:31
wbkC9.bmp	tmp	0 Windows	Match	Windows Tem...				03/06/02 12:38:17	03/06/02 12:31
wbkCD.bmp	tmp	0 Windows	Match	Windows Tem...				03/06/02 12:38:17	03/06/02 12:31
wbkCB.bmp	tmp	480 Windows	Match	Windows Tem...				03/06/02 12:38:06	03/06/02 12:31
wbkC8.bmp	tmp	139 Windows	Match	Windows Tem...				03/06/02 12:37:47	03/06/02 12:31
wbkC6.bmp	tmp	139 Windows	Match	Windows Tem...				03/06/02 12:37:47	03/06/02 12:31
wbkC3.bmp	tmp	139 Windows	Match	Windows Tem...				03/06/02 12:37:11	03/06/02 12:31
wbkC1.bmp	tmp	111,933 Picture	Allas	JPEG Image No...				03/06/02 12:37:06	03/06/02 12:31
wbkB9.bmp	tmp	95,932 Picture	Allas	JPEG Image No...				03/06/02 12:37:06	03/06/02 12:31
wbkB0.bmp	tmp	95,932 Picture	Allas	JPEG Image No...				03/06/02 12:37:06	03/06/02 12:31
wkB9tmp	tmp	105,097 Picture	Allas	JPEG Image No...				03/06/02 12:37:05	03/06/02 12:31
wkB9tmp	tmp	93,654 Picture	Allas	JPEG Image No...				03/06/02 12:37:05	03/06/02 12:31
wkB7.bmp	tmp	80,666 Picture	Allas	JPEG Image No...				03/06/02 12:37:05	03/06/02 12:31
wkB5.bmp	tmp	101,309 Picture	Allas	JPEG Image No...				03/06/02 12:37:05	03/06/02 12:31

Fields Report Text Hex Decode Doc Transcript Picture Console File Extents Permissions Hash Sets Attributes Lock

C:\Documents and Settings\Bob Hunter\Local Settings\Temporary Internet Files\Content.IE5\3XGPQD6L\wbkC1.bmp



Internet History, favourites, etc.
Other browsers:

Figure 13:

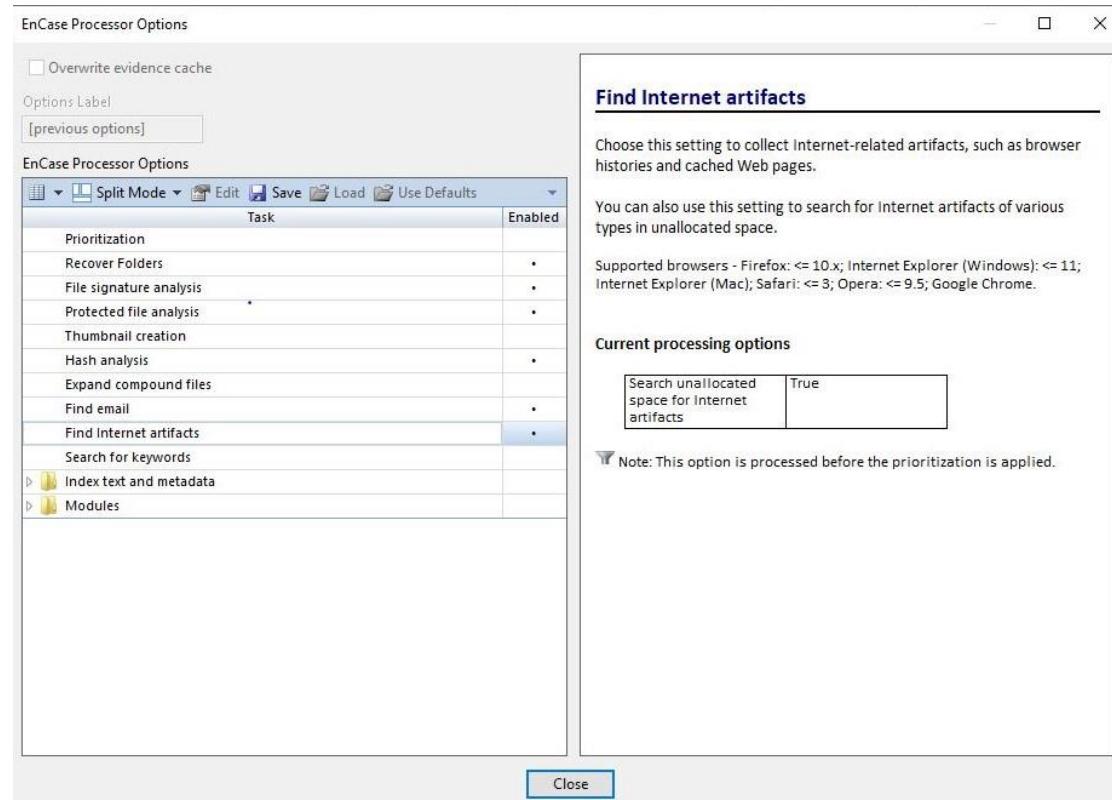


Figure 14:

The screenshot displays a digital forensic analysis interface. On the left, a tree view shows a hierarchy of files and folders under 'Internet Explorer (Windows)'. The 'History' section is expanded, showing 'Typed URL' and 'Visited Link' entries. Below this is the 'Cache' section, which is also expanded, showing 'Image', 'Code', 'HTML', 'XML', and 'Text' sub-sections. Under 'Text', there is a 'Cookies' folder. To the right of the tree view is a table titled 'Selected 0/2366' with columns: Name, File Ext, Logical Size, Item Type, Category, Signature Analysis, File Type, File Type Tag, Protected, Protection complexity, and Last Accessed. Eight rows of data are listed, all corresponding to 'NTUSER.DAT' files. The bottom half of the interface is a detailed view of a specific file entry, showing fields such as Name (NTUSER.DAT), File Ext (DAT), Logical Size (58), Item Type (Document), Category (Library), Signature Analysis (Match), File Type (Data ASCII & Binary), File Type Tag (dat), and Is Indexed (•). It also lists MD5, SHA1, Entropy, Primary Device (Hunter XP), Item Path (Internet Explorer (Windows)\History\Typed URL\NTUSER.DAT), True Path (Hunter\Hunter XP\Documents and Settings\Bob Hunter\Internet Explorer (Windows)\History\Typed URL\NTUSER.DAT), Internet Artifact (History\Typed URL), Type (uri6), Title (www.thestalkershomepage.com), Url Name (www.thestalkershomepage.com), Uri Host (www.thestalkershomepage.com), Last Modification (03/06/02 15:15:54), Time (Internet Explorer (Windows)), Profile Name (Bob Hunter), and Message Size (58). The status bar at the bottom indicates the full path: Hunter\Hunter XP\C\Documents and Settings\Bob Hunter\Internet Explorer (Windows)\History\Typed URL\NTUSER.DAT.

Emails, local and web-based:

Figure 15:

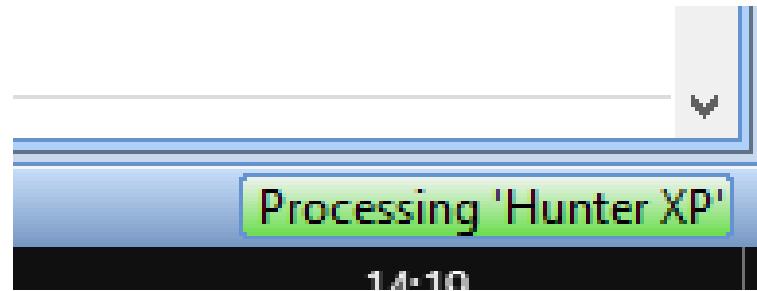


Figure 16:

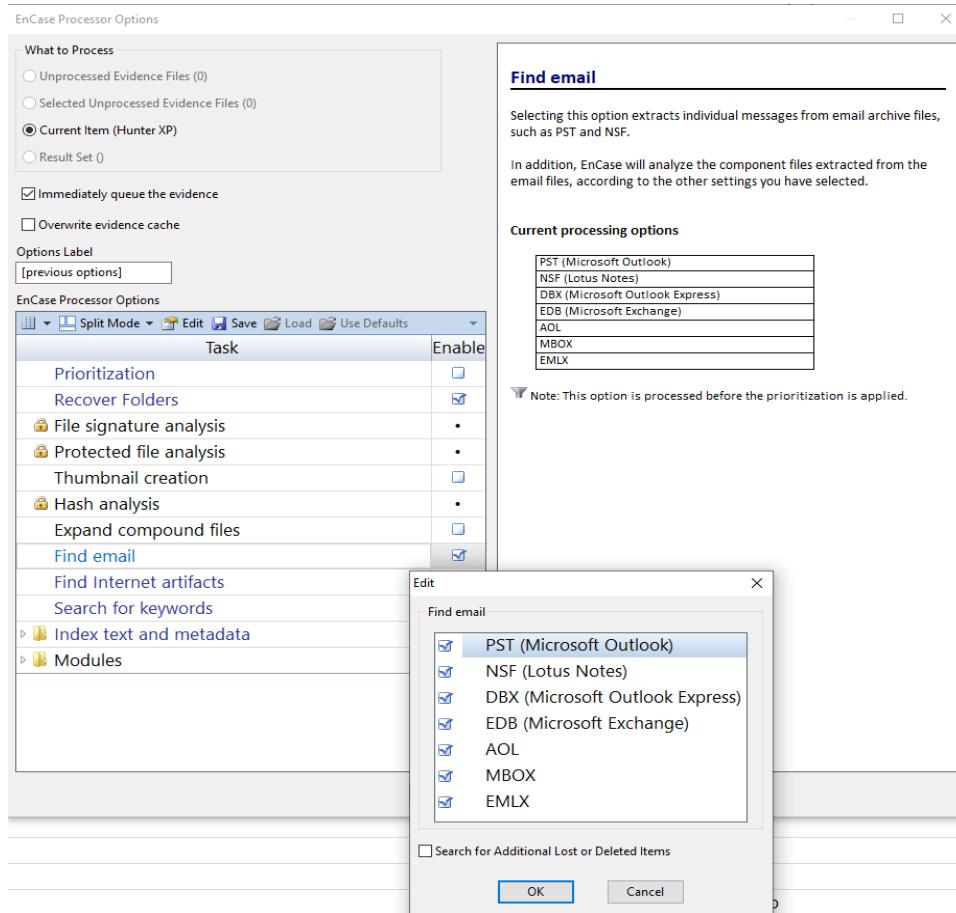


Figure 17:

The screenshot shows the 'Case (Hunter Work)' software interface. The left sidebar contains a navigation tree with sections like Home, Processor Manager, Viewing (Record), Case, Evidence, Reports, and various sub-options for Internet, Email, and Registry. The 'Evidence' section is currently selected. The main area displays a table titled 'Table' with two columns: 'Name' and 'Original Path'. The table lists 23 items, each with a checkbox and a small icon. The items are numbered 1 through 23 and include names such as 'Hotmail - Sent Items.dbx', 'ah1878', 'chaser1149', etc. The 'Original Path' column shows the file's location on the 'Hunter XP' system, mostly within the 'C:\Documents and Settings\...' directory.

	Name	Original Path
1	Hotmail - Sent Items.dbx	Hunter XP\C\Documents and Settings\...
2	ah1878	Hunter XP\C\Program Files\America O...
3	chaser1149	Hunter XP\C\Program Files\America O...
4	ah1870	Hunter XP\C\Program Files\America O...
5	Hotmail - Bank Information.dbx	Hunter XP\C\Documents and Settings\...
6	Global.org	Hunter XP\C\Program Files\America O...
7	Folders.dbx	Hunter XP\C\Documents and Settings\...
8	ah1804	Hunter XP\C\Program Files\America O...
9	Billy.dbx	Hunter XP\C\Documents and Settings\...
10	Hotmail - Deleted Items.dbx	Hunter XP\C\Documents and Settings\...
11	Deleted Items.dbx	Hunter XP\C\Documents and Settings\...
12	chaser1132	Hunter XP\C\Program Files\America O...
13	Hotmail - MSN Announcements.dbx	Hunter XP\C\Documents and Settings\...
14	Bank Information.dbx	Hunter XP\C\Documents and Settings\...
15	Hotmail - Inbox.dbx	Hunter XP\C\Documents and Settings\...
16	chaser1191	Hunter XP\C\Program Files\America O...
17	default.org	Hunter XP\C\Program Files\America O...
18	Outbox.dbx	Hunter XP\C\Documents and Settings\...
19	Global.org	Hunter XP\C\Program Files\America O...
20	3do.software.tools.dbx	Hunter XP\C\Documents and Settings\...
21	ah1804	Hunter XP\C\Program Files\America O...
22	chaser1100	Hunter XP\C\Program Files\America O...
23	chaser1191	Hunter XP\C\Program Files\America O...

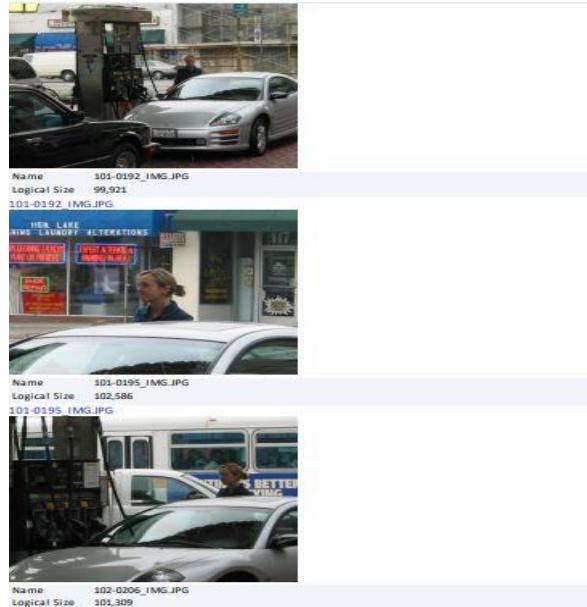
Figure 17.1:

From: Billy Ray <billyray150@hotmail.com>
To: chaser1191@hotmail.com
Sent: 22/05/02 09:01:21
Subject: Web Site

Bob here are some of the pics from the web page we are doing. I will be posting it later today, then we can send the letter to the ole man. If all goes well we will be rich men this summer.

I could not send all of the photos because of this hotmail limit, but we can hook up later by phone or IM or yahoo or something and I will show you the page.

Billy



From: Billy Ray <billyray150@hotmail.com>

To: chaser1191@hotmail.com

Sent: 30/05/02 19:11:11

Subject: Re: Web Page on Christina

yes I saw that too I will fix it, hold off on the email I tested his address its not working

>From: "IC YOU" <chaser1191@hotmail.com>

>To: billyray150@hotmail.com

>Subject: Web Page on Christina

>Date: Thu, 23 May 2002 08:48:19 -0500

>

>Billy,

>

>Page looks good, the old man should pay up. on one of the photos though you are in the reflection of the window, what where you thinking. Get that off of there, I will email dad today after you fix it.

>

>Bob

>

Retrieve operating system information, accounts information, software, time zone information etc :

Figure 18:

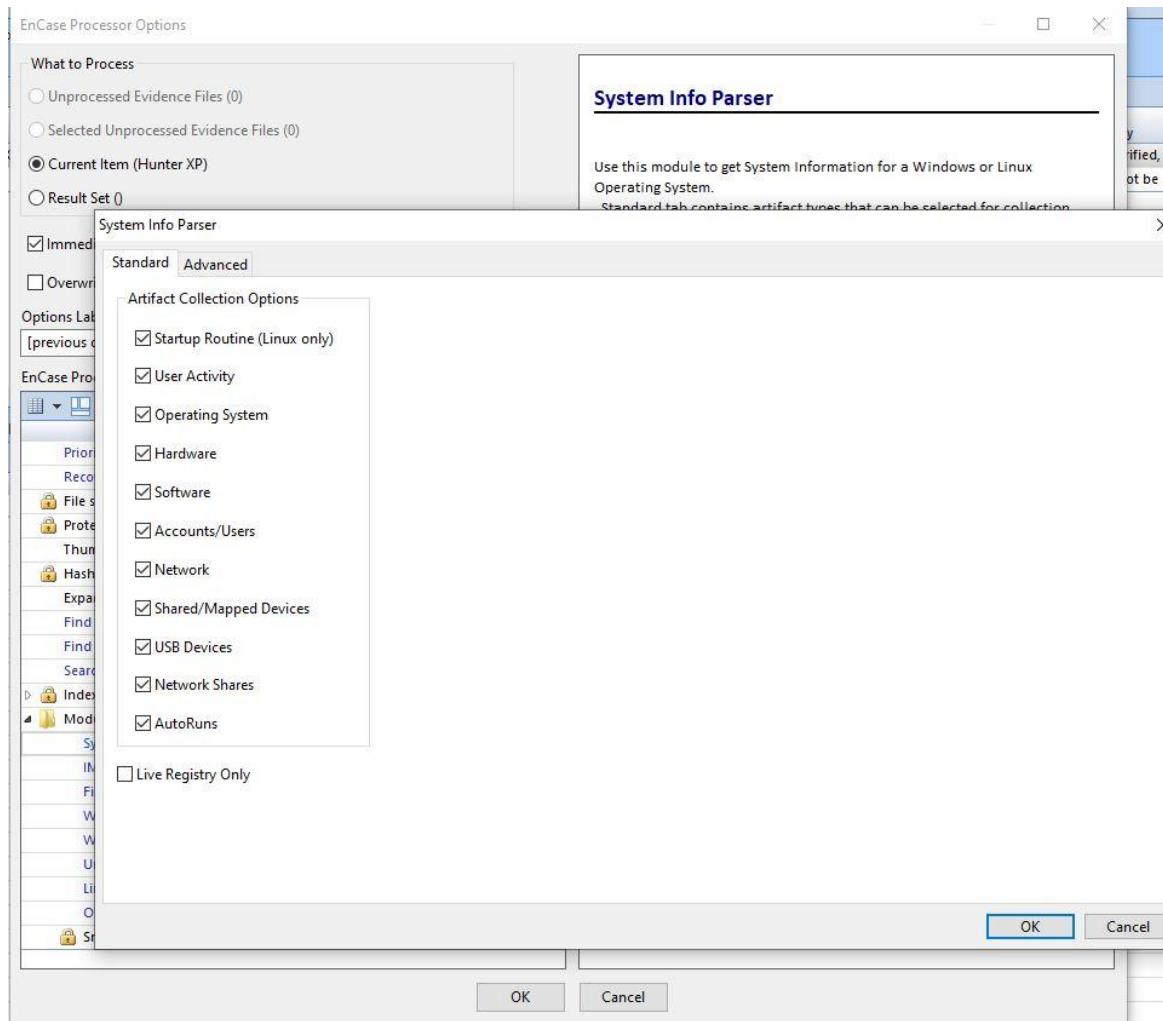


Figure 19:

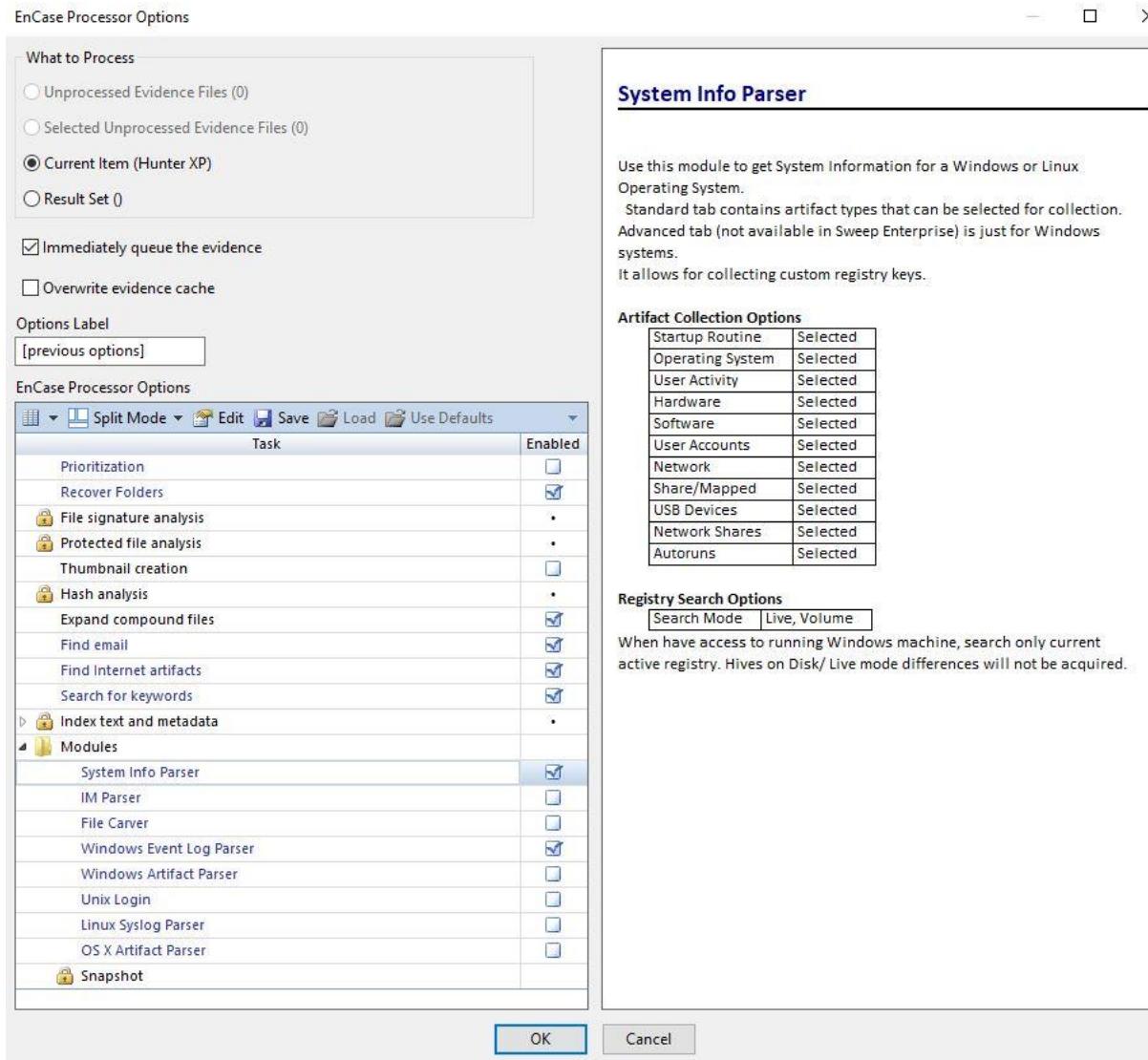


Figure 20:

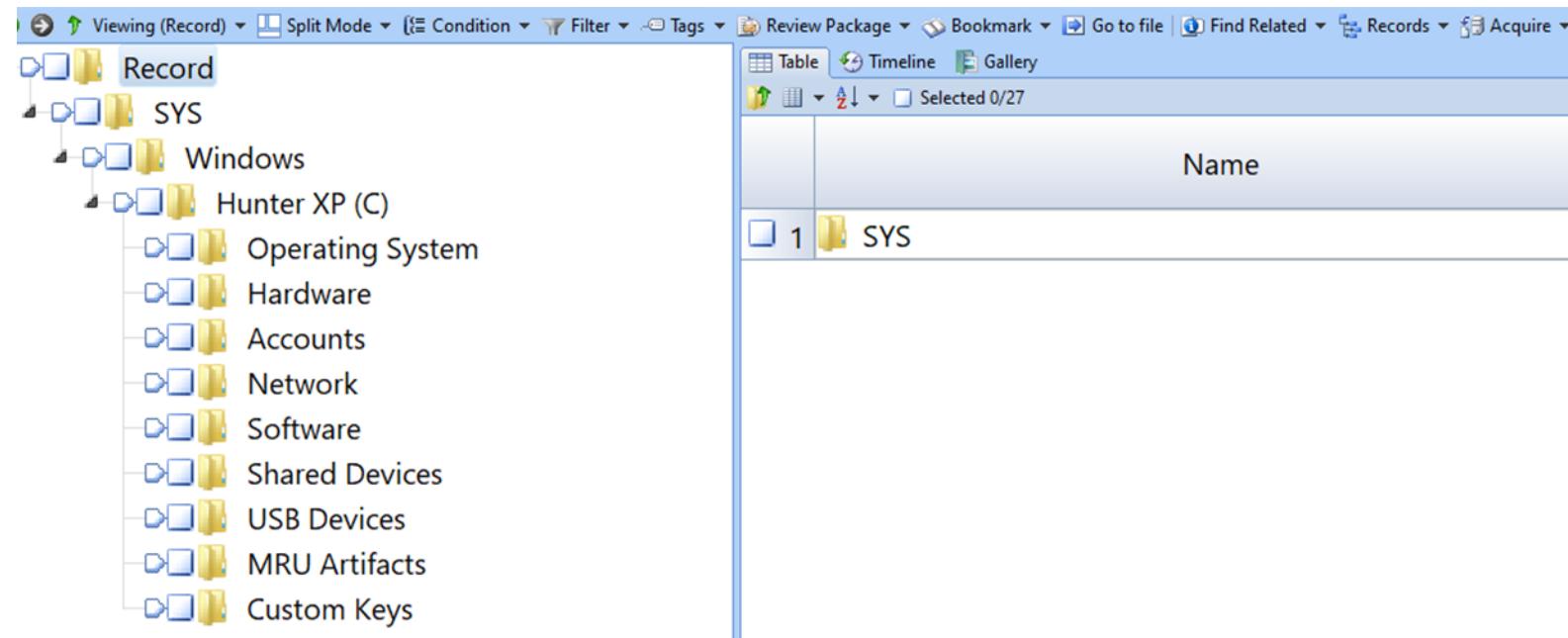


Figure 21:

The screenshot shows a software interface for viewing system artifacts. The title bar includes icons for file operations and tabs for 'Viewing (System Artifacts)', 'Split Mode', 'Bookmark', and 'Go to file'. Below the title bar, there's a toolbar with icons for file operations and a 'Registry Records' button. The main content area is a table titled 'Registry Records' with the following data:

	Name	File Offset	Last Written	Type	Value Text	Error
1	Product Name	04/06/02 18:01:57		1 Microsoft Windows XP		
2	Product ID	04/06/02 18:01:57		1 55277-005-6418583-21673		
3	Current Version	04/06/02 18:01:57		1 5.1		
4	Current Build N...	04/06/02 18:01:57		1 2600		
5	Registered Owner	04/06/02 18:01:57		1 PC User		
6	Registered Orga...	04/06/02 18:01:57		1 PC User Company		
7	System Root	04/06/02 18:01:57		1 F:\WINDOWS		
8	Path Name	04/06/02 18:01:57		1 F:\WINDOWS		
9	Install Date	04/06/02 18:01:57		4 Thu, 28 Feb 2002 22:02:39 GMT		
10	Shutdown Time	04/06/02 17:58:42		3 Tue, 04 Jun 2002 22:58:42 GMT		

Figure 22:

The screenshot shows a software interface for viewing time zone artifacts. The title bar includes icons for file operations and tabs for 'Viewing (time zone)', 'Split Mode', 'Bookmark', and 'Go to file'. Below the title bar, there's a toolbar with icons for file operations and a 'Registry Records' button. The main content area is a table titled 'Registry Records' with the following data:

	Name	File Offset	Last Written	Type	Value Text	Error
1	Standard Time Bias	18/04/02 09:33:31		4 0		
2	Standard Time	18/04/02 09:33:31		1 Central Standard Time		
3	Standard Time is se...	18/04/02 09:33:31		3 Month: 10 - Sunday: 5 - Time: 02:00		
4	Daylight Time Bias	18/04/02 09:33:31		4 +1		
5	Daylight Savings	18/04/02 09:33:31		1 Central Daylight Time		
6	Daylight Savings is ...	18/04/02 09:33:31		3 Month: 4 - Sunday: 1 - Time: 02:00		
7	Active Time Bias of...	18/04/02 09:33:31		4 -5		
8	Current Time offset...	18/04/02 09:33:31		4 -6		
9	Display	28/02/02 09:25:16		1 (GMT-06:00) Central Time (US & Canada)		

Figure 23:

Service Artifacts

Table Selected 0/270

	Name	File Offset	Service Name	Display Name	Description	Group	Image Path	Object Name	Depend on Group
1	Abiosdsk				Primary disk				
2	abp480n5				SCSI miniport				
3	ACPI			Microsoft ACPI Driver		Boot Bus Extender	System32\DRIVERS\A...		
4	ACPIEC					Boot Bus Extender			
5	adpu160m				SCSI miniport				
6	AFD			AFD Networking Sup...		TDI	\SystemRoot\System3...		
7	agp440			Intel AGP Bus Filter		PnP Filter	System32\DRIVERS\a...		
8	Aha154x				SCSI miniport				
9	aic78u2				SCSI miniport				
10	aic78xx				SCSI miniport	System32\DRIVERS\ai...			
11	Alerter			Alerter	Notifies selected user...		%SystemRoot%\Syste... NT AUTHORITY\Loca...		
12	ALG			Application Layer Gat...	Provides support for ...		%SystemRoot%\Syste... NT AUTHORITY\Loca...		
13	Alilde				System Bus Extender				
14	amsint				SCSI miniport				
15	AppMgmt			Application Manage...	Provides software ins...		%SystemRoot%\syste... LocalSystem		
16	Arp1394			1394 ARP Client Prot...	1394 ARP Client Prot...	NDIS	System32\DRIVERS\ar...		
17	asc				SCSI miniport				
18	asc350p				SCSI miniport				
19	asc3550				SCSI miniport				
20	ASCTRM			ASCTRM		ASCTRM			
21	AsyncMac			RAS Asynchronous M...	RAS Asynchronous M...		System32\DRIVERS\as...		
22	atapi			Standard IDE/ESDI Ha...		SCSI miniport	System32\DRIVERS\at...		
23	Atdisk				Primary disk				

Figure 24:

The screenshot shows a digital forensic analysis interface with two main panes. The top pane is a table view titled "Win User Account Records" showing 8 entries. The bottom pane is a detailed view of the "Administrator" account.

Table View (Top Pane):

Name	File Offset	User Name	Full Name	Comment	Primary Group	Security ID	Group ID	Profile Path	Last Logon Date
Administrator		Administrator		Built-in account for admini...	S-1-5-21-122927282...	513			
Bob Hunter		Bob Hunter			S-1-5-21-122927282...	513	%SystemDrive%\Do...	04/06/02 18:01:54	
Guest		Guest		Built-in account for guest a...		513			03/06/02 11:49:37
HelpAssistant		HelpAssistant	Remote Desktop He...	Account for Providing Rem...	S-1-5-21-122927282...	513			
SUPPORT_38894...		SUPPORT_388945a0	CN=Microsoft Corp...	This is a vendor's account f...	S-1-5-21-122927282...	513			
S-1-5-18		systemprofile			S-1-5-18		%systemroot%\syst...		
S-1-5-19		LocalService			S-1-5-19		%SystemDrive%\Do...		
S-1-5-20		NetworkService			S-1-5-20		%SystemDrive%\Do...		

Detailed View (Bottom Pane):

Name	Value
s Name	Administrator
i File Offset	
s User Name	Administrator
s Full Name	
s Comment	Built-in account for administering the computer/domain
s Primary Group	
s Security ID	S-1-5-21-1229272821-1580818891-854245398-500

Timeline Analysis:

Figure 25:

The screenshot shows a software interface with a toolbar at the top containing icons for viewing system artifacts, split mode, bookmark, and go to file. Below the toolbar is a menu bar with 'Viewing (System Artifacts)', 'Split Mode', 'Bookmark', and 'Go to file'. A 'Registry Records' option is also present. The main area is titled 'Timeline' and contains a table with the following data:

Name	File Offset	Last Written	Type	Value Text	Error
1 Product Name	04/06/02 18:01:57		1 Microsoft Windows XP		
2 Product ID	04/06/02 18:01:57		1	55277-005-6418583-21673	
3 Current Version	04/06/02 18:01:57		1	5.1	
4 Current Build N...	04/06/02 18:01:57		1	2600	
5 Registered Owner	04/06/02 18:01:57		1 PC User		
6 Registered Orga...	04/06/02 18:01:57		1 PC User Company		
7 System Root	04/06/02 18:01:57		1 F:\WINDOWS		
8 Path Name	04/06/02 18:01:57		1 F:\WINDOWS		
9 Install Date	04/06/02 18:01:57		4	Thu, 28 Feb 2002 22:02:39 GMT	
10 Shutdown Time	04/06/02 17:58:42		3	Tue, 04 Jun 2002 22:58:42 GMT	

Figure 26:

The screenshot shows a software interface with a toolbar at the top containing icons for viewing time zone, split mode, bookmark, and go to file. Below the toolbar is a menu bar with 'Viewing (Time Zone)', 'Split Mode', 'Bookmark', and 'Go to file'. A 'Registry Records' option is also present. The main area is titled 'Timeline' and contains a table with the following data:

Name	File Offset	Last Written	Type	Value Text	Error
1 Standard Time Bias	18/04/02 09:33:31		4	0	
2 Standard Time	18/04/02 09:33:31		1	Central Standard Time	
3 Standard Time is se...	18/04/02 09:33:31		3	Month: 10 - Sunday: 5 - Time: 02:00	
4 Daylight Time Bias	18/04/02 09:33:31		4	+1	
5 Daylight Savings	18/04/02 09:33:31		1	Central Daylight Time	
6 Daylight Savings is ...	18/04/02 09:33:31		3	Month: 4 - Sunday: 1 - Time: 02:00	
7 Active Time Bias of...	18/04/02 09:33:31		4	-5	
8 Current Time offset...	18/04/02 09:33:31		4	-6	
9 Display	28/02/02 09:25:16		1	(GMT-06:00) Central Time (US & Canada)	

Registry Analysis And Registry Protected Area :

Figure 27:

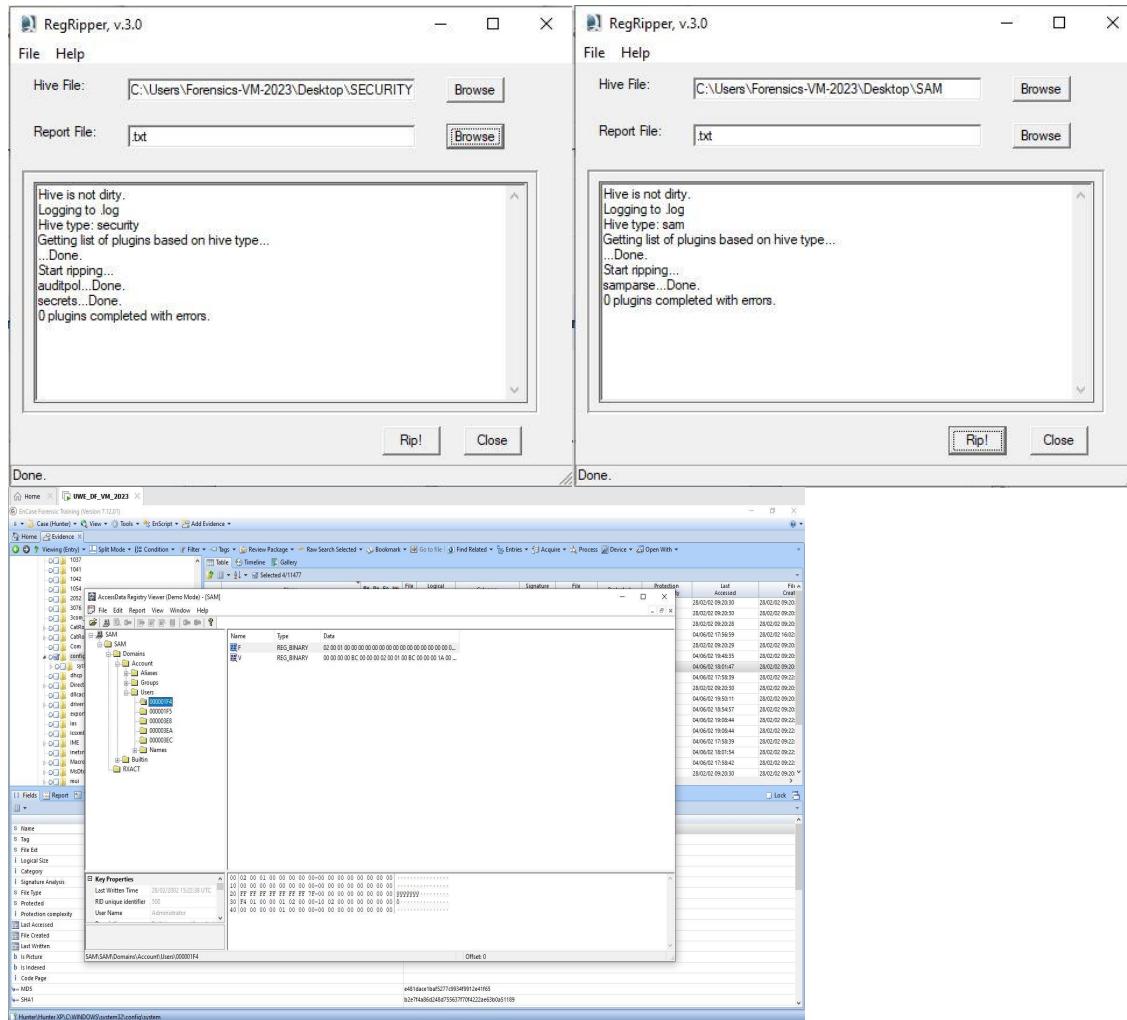
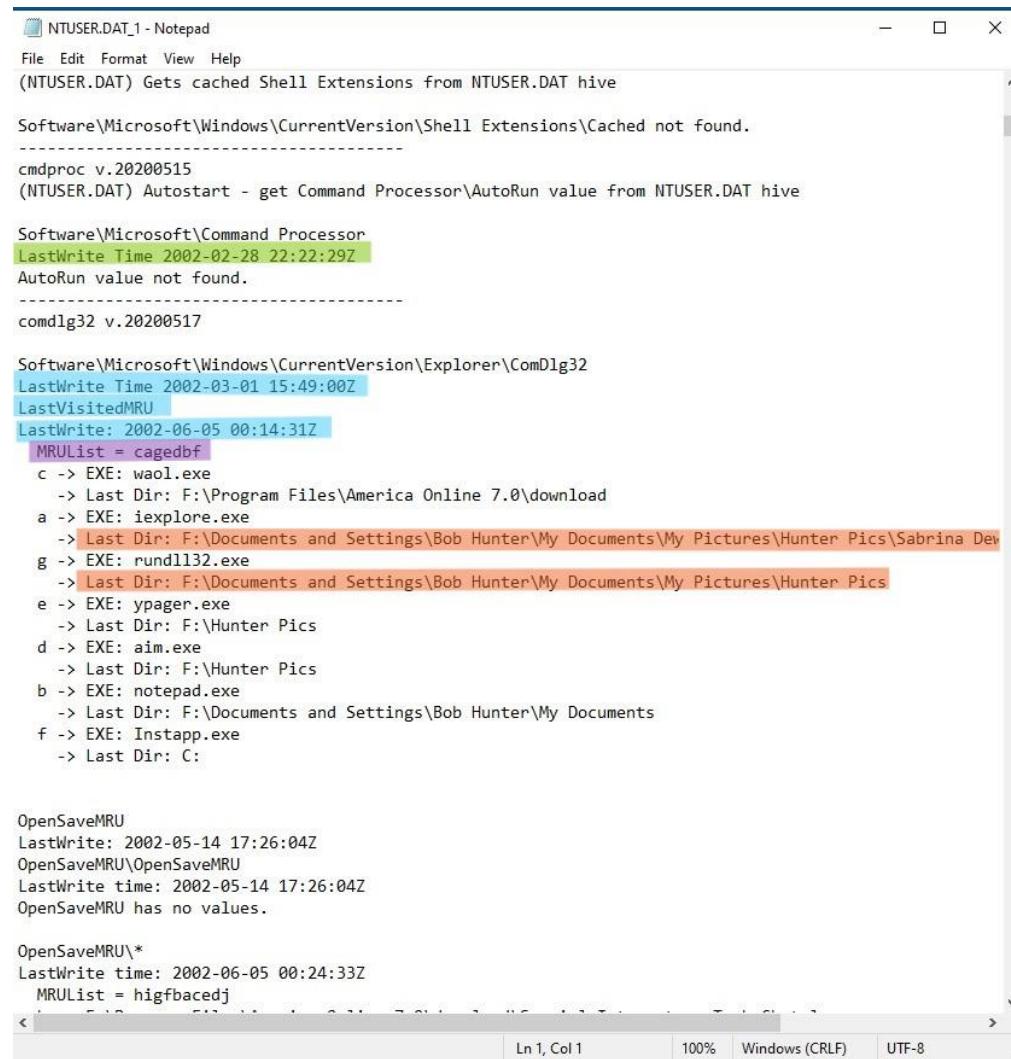


Figure 28:



NTUSER.DAT_1 - Notepad

File Edit Format View Help

(NTUSER.DAT) Gets cached Shell Extensions from NTUSER.DAT hive

```
Software\Microsoft\Windows\CurrentVersion\Shell Extensions\Cached not found.
-----
cmdproc v.20200515
(NTUSER.DAT) Autostart - get Command Processor\AutoRun value from NTUSER.DAT hive

Software\Microsoft\Command Processor
LastWrite Time 2002-02-28 22:22:29Z
AutoRun value not found.
-----
comdlg32 v.20200517

Software\Microsoft\Windows\CurrentVersion\Explorer\ComDlg32
LastWrite Time 2002-03-01 15:49:00Z
LastVisitedMRU
LastWrite: 2002-06-05 00:14:31Z
    MRUList = cagedbf
    c -> EXE: waol.exe
        -> Last Dir: F:\Program Files\America Online 7.0\download
    a -> EXE: iexplore.exe
        -> Last Dir: F:\Documents and Settings\Bob Hunter\My Documents\My Pictures\Hunter Pics\Sabrina Dev
    g -> EXE: rundll32.exe
        -> Last Dir: F:\Documents and Settings\Bob Hunter\My Documents\My Pictures\Hunter Pics
    e -> EXE: ypager.exe
        -> Last Dir: F:\Hunter Pics
    d -> EXE: aim.exe
        -> Last Dir: F:\Hunter Pics
    b -> EXE: notepad.exe
        -> Last Dir: F:\Documents and Settings\Bob Hunter\My Documents
    f -> EXE: Instapp.exe
        -> Last Dir: C:

OpenSaveMRU
LastWrite: 2002-05-14 17:26:04Z
OpenSaveMRU\OpenSaveMRU
LastWrite time: 2002-05-14 17:26:04Z
OpenSaveMRU has no values.

OpenSaveMRU\*
LastWrite time: 2002-06-05 00:24:33Z
    MRUList = higfbacedj
```

Ln 1, Col 1 | 100% | Windows (CRLF) | UTF-8

Link files and Recycle Bin:

Figure 29:

The screenshot shows a software interface for managing artifacts. On the left, there is a tree view of artifact parsers:

- Record
- Windows Artifact Parser
 - Recycle Bin
 - INFO2
- MFT Transfers
- \$LogFile
- Link Parser

On the right, there is a table view of records:

	Name	Rev	Rep	Foll	Ignr	File Ext	Logical Size	Item Type	Category
1	Recycle Bin						0 Document	Folder	
2	MFT Transfers						0 Document	Folder	
3	Link Parser						0 Document	Folder	

Figure 30:

The screenshot shows the Case Analyzer interface with a tree view on the left and a detailed table on the right.

Left Panel (Tree View):

- Reports
 - Accounts and Users
 - Drives Removable + Local
 - Drives Shared + Network
 - File Activity
 - \$LogFile
 - Deleted
 - Recycle Bin
 - Documents
 - Explorer Typed Folders
 - File Browser History
 - Link Files
 - Multimedia
 - Recent Files
 - Hardware
 - Internet Activity
 - Logins and Boots
 - Messages
 - Network
 - Operating System
 - Software
 - Software Usage & Autorun
 - Executable Link Files
 - System Changes

	Target	Link File	Base Path	Base Path W	Command Line
1	Hunter XP Yahoo! Messenger.lnk	F:\Program Files\Yahoo!\Messenger\YPager.exe			
2	Hunter XP Copernic 2001 Basic.lnk	F:\Program Files\Copernic 2001 Basic\Copernic.exe			
3	Hunter XP Accessibility Wizard.lnk	F:\WINDOWS\system32\accwiz.exe			
4	Hunter XP Network Connections.lnk	F:\WINDOWS\explorer.exe		::(20D04FE0-3AEA-1069-A2D8-08002B30309D)	
5	Hunter XP New Connection Wizard.lnk	F:\WINDOWS\system32\rundll32.exe			netshell.dll,StartNCW
6	Hunter XP Remote Desktop Connection.lnk	F:\WINDOWS\system32\mstsc.exe			
7	Hunter XP HyperTerminal.lnk	F:\Program Files\Windows NT\hypertrm.exe			
8	Hunter XP Network Setup Wizard.lnk	F:\WINDOWS\system32\rundll32.exe			hnetwiz.dll,HomeNetWizardRunDll
9	Hunter XP Sound Recorder.lnk	F:\WINDOWS\system32\sndrec32.exe			
10	Hunter XP Volume Control.lnk	F:\WINDOWS\system32\sndvol32.exe			
11	Hunter XP Windows Media Player.lnk	F:\Program Files\Windows Media Player\wmplayer.exe		/prefetch:1	
12	Hunter XP System Information.lnk	F:\Program Files\Common Files\Microsoft Shared\MSInfo\msinfo			
13	Hunter XP System Restore.lnk	F:\WINDOWS\system32\Restore\strui.exe			
14	Hunter XP Disk Cleanup.lnk	F:\WINDOWS\system32\cleanmgr.exe			
15	Hunter XP Scheduled Tasks.lnk	F:\WINDOWS\explorer.exe		::(20D04FE0-3AEA-1069-A2D8-08002B30309D)	
16	Hunter XP Activate Windows.lnk	F:\WINDOWS\system32\oobe\msoobe.exe		/A	
17	Hunter XP Files and Settings Transfer Wizard.lnk	F:\WINDOWS\system32\usmt\migwiz.exe			
18	Hunter XP WordPad.lnk	F:\Program Files\Windows NT\Accessories\wordpad.exe			
19	Hunter XP Calculator.lnk	F:\WINDOWS\system32\calc.exe			
20	Hunter XP Paint.lnk	F:\WINDOWS\system32\mspaint.exe			
21	Hunter XP Scanner and Camera Wizard.lnk	F:\WINDOWS\system32\wiaacmgr.exe		-SelectDevice	
22	Hunter XP Windows Movie Maker.lnk	F:\Program Files\Movie Maker\moviemk.exe			
23	Hunter XP Data Sources (ODBC).lnk	F:\WINDOWS\system32\odbcad32.exe			
24	Hunter XP America Online 7.0.lnk	F:\Program Files\America Online 7.0\aoi.exe			
25	Hunter XP AOL System Information.lnk	F:\Program Files\Common Files\aoleshare\sysinfo\sinf.exe			
26	Hunter XP Palm Desktop.lnk	F:\Palm\palm.exe			
27	Hunter XP HotSync Manager.lnk	F:\Palm\HOTSYNC.EXE			

Hunter Work\external drive two files have been found under records

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Figure 31:

The screenshot shows the Encase Evidence Processor software interface. The top navigation bar includes Home, Reports, Evidence (selected), Bookmarks, Viewing (software), Split Mode, Filter, Tags, Raw Search Selected, Bookmark, Go to file, Find Related, Entries, Acquire, Process, Device, and Open With.

The left sidebar displays a tree view of registry keys under "Software\Microsoft\Windows\CurrentVersion\Explorer\BitBucket". Key nodes include Control Panel, CSCSettings, DateTime, Dynamic Directory, Explorer, AutoplayHandlers, BitBucket, and various sub-keys like Advanced, AppKey, Associations, and NukeOnDelete.

The central area features a table titled "Selected 0/176090". The columns are Name, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and File Created. The table contains the following data:

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	File Created
1 c			1 Folder						
2 c			1 Folder						
3 f			1 Folder						
4 f			1 Folder						
5 NukeOnDelete			4 Unknown						
6 Percent			4 Unknown						
7 UseGlobalSettings			4 Unknown						

The bottom section contains tabs for Fields, Report, Text, Hex, Decode, Doc, Transcript, Picture, Console, File Extents, Permissions, Hash Sets, and Attributes. A status bar at the bottom shows memory usage (00 00 00 00) and a case backup button.

Figure 32:

	Target	FileName	Path	PathW
13	Hunter XP UserGuidev2[1].3c.pdf	F:\Documents and Settings\Bob Hunter\My Documents\X Drive\l	F:\Documents and Settings\Bob Hunter\My Documents\X Dri	
14	Hunter XP X Drive	F:\Documents and Settings\Bob Hunter\My Documents\X Drive	F:\Documents and Settings\Bob Hunter\My Documents\X Dr	
15	Hunter XP X Drive.txt	F:\Documents and Settings\Bob Hunter\My Documents\X Drive.t	F:\Documents and Settings\Bob Hunter\My Documents\X Dr	
16	Hunter XP Sabrina Dewercs	F:\Documents and Settings\Bob Hunter\My Documents\My Pictu	F:\Documents and Settings\Bob Hunter\My Documents\My F	
17	Hunter XP 101-0184_IMG.JPG	F:\Documents and Settings\Bob Hunter\My Documents\My Pictu	F:\Documents and Settings\Bob Hunter\My Documents\My F	
18	Hunter XP 101-0188 IMG JPG	F:\Documents and Settings\Bob Hunter\My Documents\My Pictu	F:\Documents and Settings\Bob Hunter\My Documents\My F	

Instant Messaging Clients:

Figure 33:

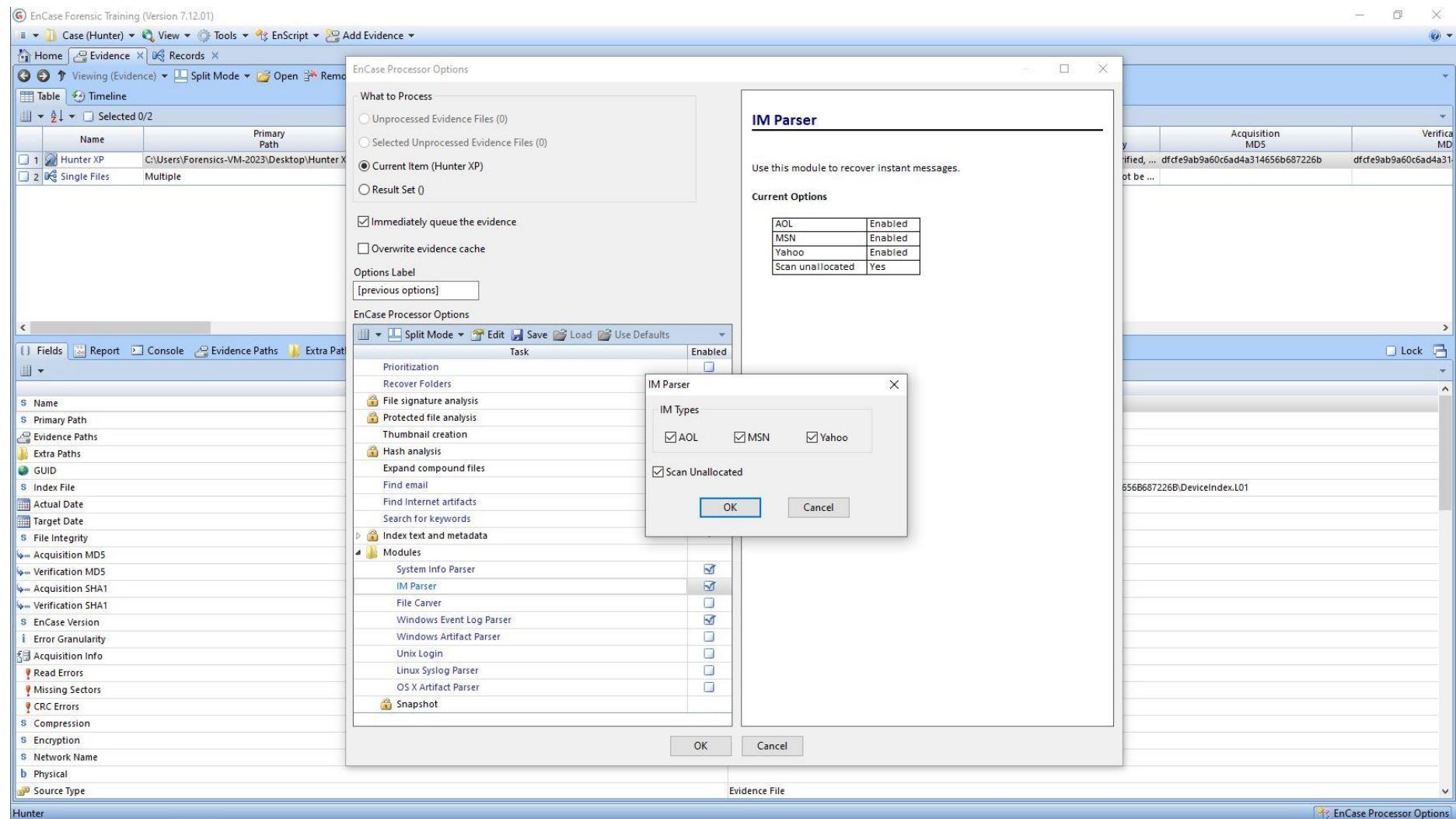


Figure 34:

The screenshot shows a digital forensic analysis interface. At the top, there's a navigation bar with tabs for Home, Processor Manager, Evidence, and Records. Below the navigation bar, the title bar indicates "Viewing ([billyray150, bob_hunter1191]@2002-05-23 02:25:03Z)" and "Split Mode". A sidebar on the left lists "Yahoo IM Records". The main area features a table titled "Table" with columns: Name, File Offset, IM Time, Yahoo OpCode, and Yahoo Message Type. One row is visible, showing "1" in the first column and "0 22/05/02 21:25:03" in the IM Time column. At the bottom, there's a "Fields" tab selected, followed by "Report" and "Console". The "Report" tab is active. Below the tabs, there are buttons for "Zoom In", "Zoom Out", and "100%". The "Report" section displays the following details:

File Offset	IM Time	From	To	IM Text
0	22/05/02 21:25:03	billyray150	bob_hunter1191	Bob I set up the web page so we can email the old man now

Figure 35:

The screenshot shows a digital forensic analysis interface with a main table view and a detailed view at the bottom.

Main View (Table):

Name	File Offset	IM Time	Yahoo OpCode	Yahoo Message Type	From	To	
1		04/06/02 18:49:15	0-0	CHAT_INITIATION	bob_hunter1191	billyray150	
2		20 04/06/02 18:49:15	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Billy thi
3		211 04/06/02 19:38:53	0-0	CHAT_INITIATION	bob_hunter1191	billyray150	
4		231 04/06/02 19:38:53	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Bob ple
5		293 04/06/02 19:43:33	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	Bob I ar
6		326 04/06/02 19:43:40	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	but tir
7		355 04/06/02 19:43:45	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	whats u
8		383 04/06/02 19:44:07	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I think t
9		469 04/06/02 19:44:10	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	what if
10		513 04/06/02 19:44:31	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I made
11		592 04/06/02 19:44:44	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	how yo
12		656 04/06/02 19:45:24	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I install
13		756 04/06/02 19:45:35	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	ok, just
14		822 04/06/02 19:46:00	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Yeah I k
15		903 04/06/02 19:46:02	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	keep m
16		937 04/06/02 19:46:09	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	will do
17		964 04/06/02 19:46:12	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	see ya
18		990 04/06/02 19:46:11	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	ok bye

Bottom View (Details):

File Offset	513
IM Time	04/06/02 19:44:31
Yahoo OpCode	6-0
Yahoo Message Type	NORMAL_MESSAGE
From	bob_hunter1191
To	billyray150
IM Text	I made some CDs and a thumb drive that we can hid somewhere.

Figure 36:

The screenshot shows the EnCase Forensic Training interface (Version 7.12.01) with the evidence file "UWE_DF_VM_2023". The main window displays a timeline of "Yahoo IM Records" from June 4, 2002, at 18:49:15. The timeline table has columns for Name, File Offset, IM Time, Yahoo OpCode, Yahoo Message Type, From, To, and IM Text. The "IM Text" column contains messages between users "bob_hunter1191" and "billyray150".

Name	File Offset	IM Time	Yahoo OpCode	Yahoo Message Type	From	To	IM Text
1	0	04/06/02 18:49:15	0-0	CHAT_INITIATION	bob_hunter1191	billyray150	
2	20	04/06/02 18:49:15	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Billy things are getti...
3	211	04/06/02 19:38:53	0-0	CHAT_INITIATION	bob_hunter1191	billyray150	
4	231	04/06/02 19:38:53	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Bob please call me a...
5	293	04/06/02 19:43:33	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	Bob I am here
6	326	04/06/02 19:43:40	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	about time
7	355	04/06/02 19:43:45	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	whats up
8	383	04/06/02 19:44:07	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I think the old man ...
9	469	04/06/02 19:44:10	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	what if we still need it
10	513	04/06/02 19:44:31	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I made some CDs an...
11	592	04/06/02 19:44:44	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	how you going to b...
12	656	04/06/02 19:45:24	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	I installed a new driv...
13	756	04/06/02 19:45:35	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	ok, just make sure y...
14	822	04/06/02 19:46:00	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	Yeah I know I just ne...
15	903	04/06/02 19:46:02	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	keep me posted
16	937	04/06/02 19:46:09	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	will do
17	964	04/06/02 19:46:12	6-0	NORMAL_MESSAGE	bob_hunter1191	billyray150	see ya
18	990	04/06/02 19:46:11	6-1	NORMAL_MESSAGE	billyray150	bob_hunter1191	ok bye

Below the timeline, a detailed view of message 2 is shown in the Fields pane:

File Offset	20
IM Time	04/06/02 18:49:15
Yahoo OpCode	6-0
Yahoo Message Type	NORMAL_MESSAGE
From	bob_hunter1191
To	billyray150
IM Text	Billy things are getting hot, I am going to get rid of the stuff on my drive. Keep yours for a few days. I am going to delete mine and put in another hard drive as well.

Clean Up/ Wiping Utilities :

Figure 37:

The screenshot shows the Wireshark interface with the following details:

Timeline View:

Name	File Offset	Event ID	Event Type	Generated	Written	Source	Category	SID	Computer	String Data
466	96,404	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	Fast User Switching Co
467	96,632	7,035	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	IMAPI CD-Burning COI
468	96,856	7,035	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	Remote Access Auto C
469	97,100	7,035	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	SSDP Discovery Service
470	97,312	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	IMAPI CD-Burning COI
471	97,528	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	SSDP Discovery Service
472	97,732	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	Remote Access Auto C
473	97,968	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	IMAPI CD-Burning COI
474	98,184	7,035	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	Background Intelligent
475	98,432	7,036	4	03/06/02 10:43:47	03/06/02 10:43:47	Service Control Man...	0		PC-V770KUX75EHT	Background Intelligent
476	98,672	20,158	4	03/06/02 10:45:06	03/06/02 10:45:06	RemoteAccess	0		PC-V770KUX75EHT	User Name The Internet (2) User Name The Internet (2)
477	98,864	8,003	1	03/06/02 13:40:12	03/06/02 13:40:12	MRxSmb	0		PC-V770KUX75EHT	\Device\NanmanData\
478	99,164	8,021	2	03/06/02 14:00:39	03/06/02 14:00:39	BROWSER	0		PC-V770KUX75EHT	\\\RYAN-TOWER\Device\NetBT_Tcpip_{1}
479	99,424	8,032	1	03/06/02 14:04:39	03/06/02 14:04:39	BROWSER	0		PC-V770KUX75EHT	\Device\NetBT_Tcpip_{1}
480	99,656	20,159	4	03/06/02 14:11:24	03/06/02 14:11:24	RemoteAccess	0		PC-V770KUX75EHT	The Internet (2) User Name The Internet (2) User Name The Internet (2)
481	99,848	20,158	4	03/06/02 14:15:42	03/06/02 14:15:42	RemoteAccess	0		PC-V770KUX75EHT	User Name The Internet (2) User Name The Internet (2)
482	100,040	20,159	4	03/06/02 14:20:52	03/06/02 14:20:52	RemoteAccess	0		PC-V770KUX75EHT	The Internet (2) User Name The Internet (2) User Name The Internet (2)
483	100,232	26	4	03/06/02 15:34:12	03/06/02 15:34:12	Application Popup	0		PC-V770KUX75EHT	Messenger Service Me
484	100,556	26	4	03/06/02 15:52:09	03/06/02 15:52:09	Application Popup	0		PC-V770KUX75EHT	Messenger Service Me
485	100,880	7,035	4	03/06/02 17:39:17	03/06/02 17:39:17	Service Control Man...	0		PC-V770KUX75EHT	IMAPI CD-Burning COI
486	101,104	7,036	4	03/06/02 17:39:17	03/06/02 17:39:17	Service Control Man...	0		PC-V770KUX75EHT	IMAPI CD-Burning COI

Selected Event Detail View:

Name	Value
s Name	
i File Offset	99,656
i Event ID	20,159
i Event Type	4
Generated	03/06/02 14:11:24
Written	03/06/02 14:11:24
s Source	RemoteAccess
s Category	0
s SID	
s Computer	PC-V770KUX75EHT
s String Data	The Internet (2) User Name RDA11-1
s Hex Data	
s Description	

Figure 38:

The screenshot displays a digital forensic analysis interface with the following components:

- Left Panel (File System Tree):** Shows a hierarchical tree view of the file system, including:
 - Cookies
 - Desktop
 - Favorites
 - Local Settings (selected)
 - Application Data (selected)
 - Help
 - Identities (selected)
 - (8054E531-ABCC-4D69-A565-3978F75945DF) (selected)
 - Microsoft (selected)
 - Outlook Express
 - History
 - Temp
 - Temporary Internet Files (selected)
 - Content.IE5 (selected)
 - 042WPPGU
 - 6ZSJ6TBD
 - 8XGPQD6L
 - UFK38B83
 - My Documents
 - Next Head
- Central Panel (Table View):** A table showing file analysis results for selected files. The columns include:

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed
8873 cleardot[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:37:15
8874 cleardot[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:41:01
8875 clear[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:19:13
8876 clear[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:22:43
8877 Clear Day.htm	htm	276 Document	Match	HyperText Mar...				28/02/02 15:49:49
8878 Clear Day Bkgrd.jpg	jpg	5,675 Picture	Match	JPEG Image St...				28/02/02 15:49:49
8879 cleanup.log	log	61,471 Document	Match	Log				03/06/02 18:54:29
8880 CLEANMGR.EXE-1F86EA8E.pf	pf	45,730 None	Unknown					03/06/02 12:08:44
8881 cleanmgr.exe	exe	61,440 Executable	Match	Windows Exec...				03/06/02 12:08:40
8882 clbcatq.dll	dll	468,480 Library	Match	Dynamic Link ...				04/06/02 18:58:48
8883 clbcatex.dll	dll	100,864 Library	Match	Dynamic Link ...				28/02/02 15:44:20
8884 clb.dll	dll	10,752 Library	Match	Dynamic Link ...				14/05/02 11:31:03
8885 classpnp.sys	sys	44,928 Executable	Match	Executable				28/02/02 16:00:28
8886 Classic.wmz	wmz	20,502 Archive	Alias	Android Appli...				28/02/02 15:51:17
- Bottom Panel (File Details):** Provides detailed information about the selected file (cleanup.log):

Initialized Size	61,471
Physical Size	71,580
Starting Extent	0C-C153519
File Extents	9
Permissions	*
Physical Location	314,439,168
Physical Sector	614,139
Evidence File	Hunter XP
File Identifier	8419
GUID	b0e643d48d249e89b3a8b36dff45df0
Attributes	*
Sequence ID	1
Logical sequence number	4E9426B

Permissions Table:

Name	Id	Property	Permissions
Bob Hunter	S-1-5-21-1229272821-1580818891-854245398-1004	Allow	[FC] [M] [R&X] [R] [W] [Sync]
System	S-1-5-18	Allow	[FC] [M] [R&X] [R] [W] [Sync]
Administrators	S-1-5-32-544	Allow	[FC] [M] [R&X] [R] [W] [Sync]
Bob Hunter	S-1-5-21-1229272821-1580818891-854245398-1004	Owner	
None	S-1-5-21-1229272821-1580818891-854245398-513	Group	
- Address Bar:** Displays the full path of the selected file: Hunter\Hunter XP\C\Documents and Settings\Bob Hunter\Local Settings\Application Data\Identities\{8054E531-ABCC-4D69-A565-3978F75945DF}\Microsoft\Outlook Express\cleanup.log

Figure 39:

The screenshot shows a digital forensic analysis interface with the following details:

File Explorer View (Left):

- Shows a tree structure of files and folders, including: Installer, java, Media, msagent, msapps, msdownld.tmp, mui, Offline Web Pages, PCHEALTH, Prefetch (selected), Registration, repair, Resources, security, srchassst, system, system32, Tasks, Temp, and twain_32.

Table View (Main Area):

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	C
8873 cleardot[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:37:15	04/06/02 11
8874 cleardot[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:41:01	31/03/02 08
8875 clear[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:19:13	04/06/02 11
8876 clear[1].gif	gif	43 Picture	Match	GIF				04/06/02 19:22:43	04/06/02 11
8877 Clear Day.htm	htm	276 Document	Match	HyperText Mar...				28/02/02 15:49:49	28/02/02 11
8878 Clear Day Bkgrd.jpg	jpg	5,675 Picture	Match	JPEG Image St...				28/02/02 15:49:49	28/02/02 11
8879 cleanup.log	log	61,471 Document	Match	Log				03/06/02 18:54:29	31/03/02 08
8880 CLEANMGR.EXE-1F86EA8E(pf)	pf	45,730 None	Unknown					03/06/02 12:08:44	31/03/02 11
8881 cleanmgr.exe	exe	61,440 Executable	Match	Windows Exec...				03/06/02 12:08:40	23/08/01 07
8882 clbcatq.dll	dll	468,480 Library	Match	Dynamic Link ...				04/06/02 18:58:48	28/02/02 11
8883 clbcatex.dll	dll	100,864 Library	Match	Dynamic Link ...				28/02/02 15:44:20	28/02/02 11
8884 clb.dll	dll	10,752 Library	Match	Dynamic Link ...				14/05/02 11:31:03	23/08/01 07
8885 classpnp.sys	sys	44,928 Executable	Match	Executable				28/02/02 16:00:28	23/08/01 07
8886 Classic.wmz	wmz	20,502 Archive	Alias	Android Appli...				28/02/02 15:51:17	28/02/02 11

Details View (Bottom Left):

File Acquired	25/01/08 02:06:19
Initialized Size	45,730
Physical Size	47,104
Starting Extent	0C-C263944
File Extents	1
Permissions	•
Physical Location	540,589,568
Physical Sector	1,055,839
Evidence File	Hunter XP
File Identifier	9206
GUID	a2e6bd4b6a4c888b9c6d716a6b88c71
Short Name	CLEANM~1.PF
Attributes	•
Sequence ID	1
Logical sequence number	3723D62

Permissions View (Bottom Middle):

Name	Id	Property	Permissions
System	S-1-5-18	Allow	[FC] [M] [R&X] [R] [W] [Sync]
Administrators	S-1-5-32-544	Allow	[R&X] [R] [Sync]
Administrators	S-1-5-32-544	Owner	
System	S-1-5-18	Group	

Address Bar:

Hunter\Hunter XP\C\WINDOWS\Prefetch\CLEANMGR.EXE-1F86EA8E.pf

Figure 40:

The screenshot shows the Encase Evidence Processor interface with the following details:

File Search Results (Table View):

Name	File Ext.	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed
8873 cleardot[1].gif	gif	43	Picture	Match	GIF			04/06/02 19:37:15
8874 cleardot[1].gif	gif	43	Picture	Match	GIF			04/06/02 19:41:01
8875 clear[1].gif	gif	43	Picture	Match	GIF			04/06/02 19:19:13
8876 clear[1].gif	gif	43	Picture	Match	GIF			04/06/02 19:22:43
8877 Clear Day.htm	htm	276	Document	Match	HyperText Mar...			28/02/02 15:49:49
8878 Clear Day Bkgrd.jpg	jpg	5,675	Picture	Match	JPEG Image St...			28/02/02 15:49:49
8879 cleanup.log	log	61,471	Document	Match	Log			03/06/02 18:54:29
8880 CLEANMGR.EXE-1F86EA8E.pf	pf	45,730	None	Unknown				03/06/02 12:08:44
8881 cleanmgr.exe	exe	61,440	Executable	Match	Windows Exec...			03/06/02 12:08:40
8882 clbcatq.dll	dll	468,480	Library	Match	Dynamic Link ...			04/06/02 18:58:48
8883 clbcatex.dll	dll	100,864	Library	Match	Dynamic Link ...			28/02/02 15:44:20
8884 clb.dll	dll	10,752	Library	Match	Dynamic Link ...			14/05/02 11:31:03
8885 classpnp.sys	sys	44,928	Executable	Match	Executable			28/02/02 16:00:28
8886 Classic.wmz	wmz	20,502	Archive	Alias	Android Appli...			28/02/02 15:51:17

File Details for cleanmgr.exe:

Physical Size	61,440		
Starting Extent	0C-C48911		
File Extents	1		
Permissions	*		
Physical Location	100,201,984		
Physical Sector	195,707		
Evidence File	Hunter XP		
File Identifier	767		
GUID	4179d8c3f00a548aba91337e8aa0d763		
Attributes	*		
Sequence ID	1		
Object Identifiers:			
Own Id {DE78925E-2C5E-11D6-B629-00A0CC52767E} (Sequence:3629 Timestamp: 28/02/02 15:21:42 MAC:00-A0-CC-52-76-7E)			
Permissions			
Name	Id	Property	Permissions
Users	S-1-5-32-545	Allow	[R&X] [R] [Sync] [Inh ACE]
Administrators	S-1-5-32-544	Allow	[FC] [M] [R&X] [R] [W] [Sync] [Inh ACE]
System	S-1-5-18	Allow	[FC] [M] [R&X] [R] [W] [Sync] [Inh ACE]
Administrators	S-1-5-32-544	Owner	
System	S-1-5-18	Group	

Address Bar: Hunter\Hunter XP\C\WINDOWS\system32\cleanmgr.exe

External Drives; Network Connections:

Figure 41:

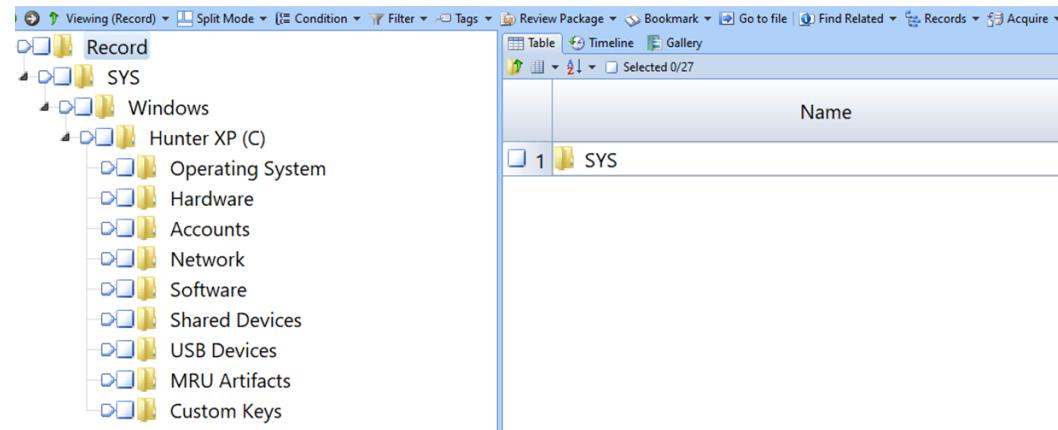


Figure 42:

The screenshot shows a software interface with a navigation bar at the top. The main area features a table titled 'USB Records'. The table has columns for Name, File Offset, Friendly Name, Vendor, Product, Serial Number, Last Mapped Drive, User Account, Last Connected Date, and Last Connected In Target System. There are two entries in the table:

	Name	File Offset	Friendly Name	Vendor	Product	Serial Number	Last Mapped Drive	User Account	Last Connected Date	Last Connected In Target System
1	Netac OnlyDisk ...		Netac OnlyDisk USB...	Netac	OnlyDisk	7&1042c72&0		Bob Hunter	03/06/02 15:05:15	
2	TREK2000 TD-G2...		TREK2000 TD-G2 US...	TREK2000	TD-G2	7&20168c9b&0	G:			

Perform Data Carving:

Figure 43:

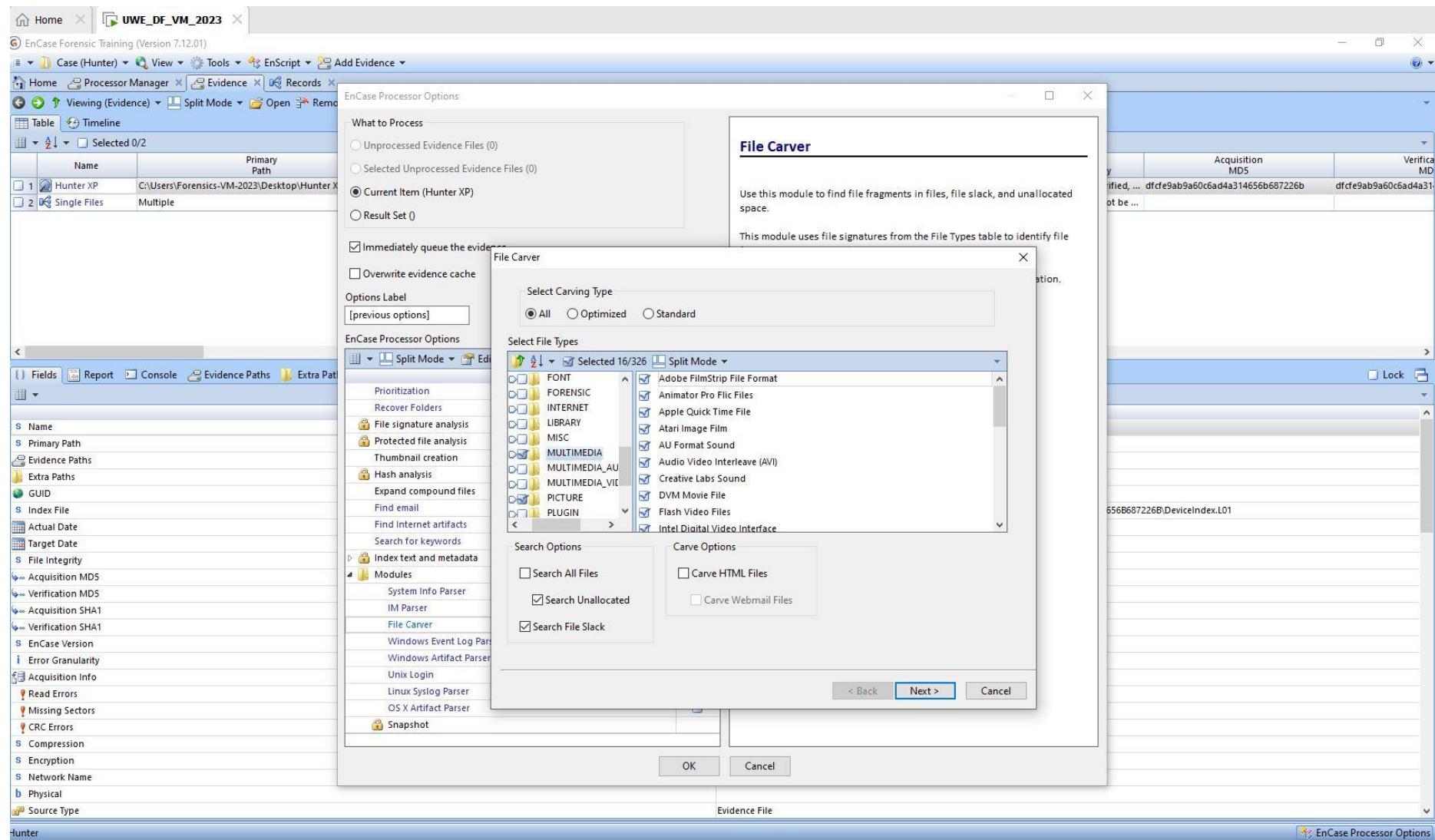


Figure 44:

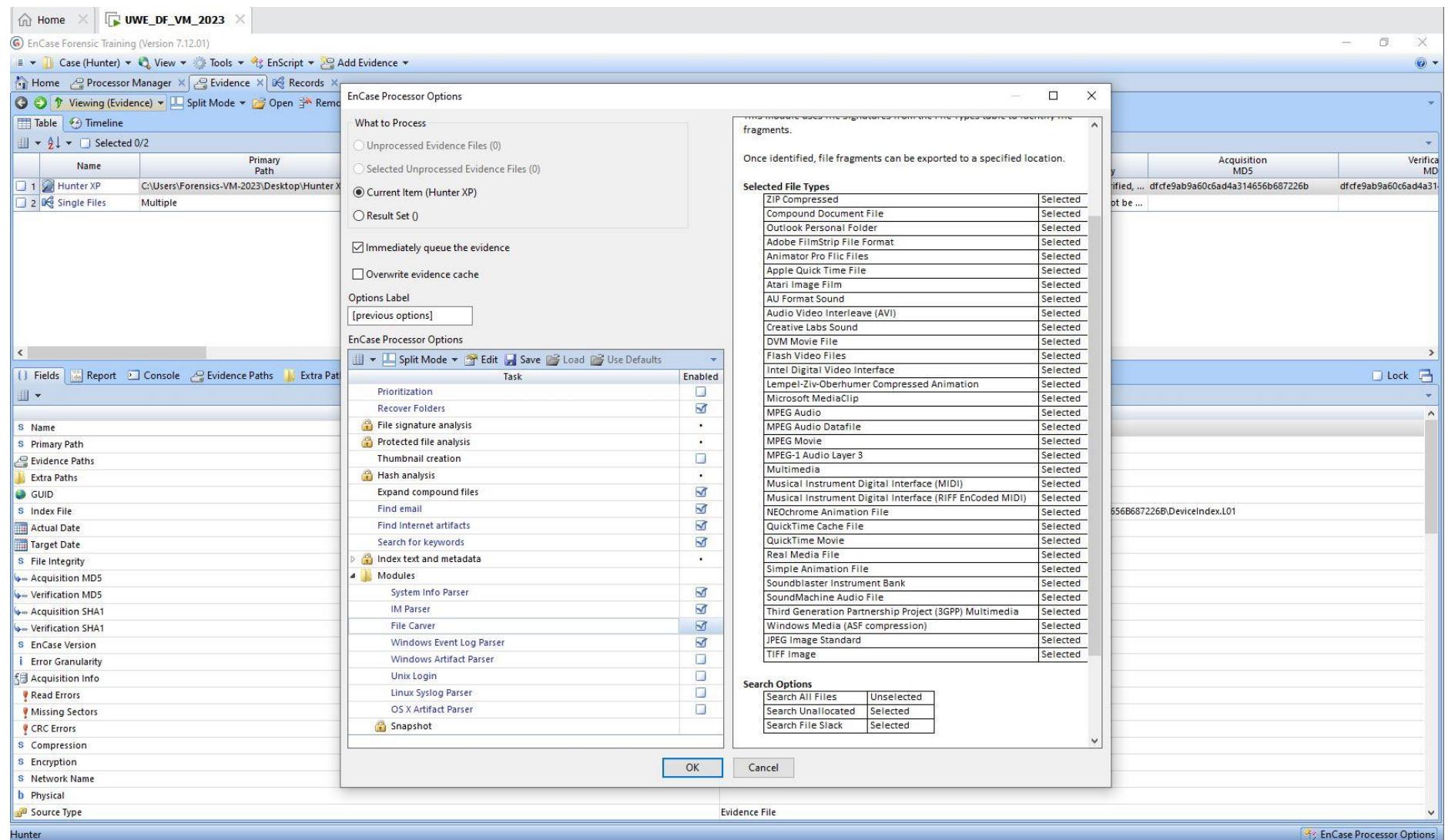


Figure 45:

The screenshot shows the File Carver software interface. The left pane displays a hierarchical file tree with various folders and files, including '102-0283_IMG.JPG', 'Global.org', 'Travis', 'Slack Table', 'chaser1191', 'Chaser1191', 'Mail', 'Mail You've Sent', 'If you love your daughter', 'Your Daughters Safety Depends on This!!!', 'Slack Table', 'Internet', and 'Internet Explorer (Windows)'. The right pane features a search results table with columns: Name, Re, Fo, Ig, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and File Created. A single entry is listed: '1 Html Body' (Logical Size: 0, Category: Folder). Below the table is a detailed properties view for the 'Html Body' folder, listing fields such as Name, Logical Size, Category, Is Indexed, Item Path, True Path, Description, Initialized Size, Physical Size, File Extents, Evidence File, File Identifier, GUID, and Attributes. The bottom status bar shows the path: 'Hunter\chaser1191\Chaser1191\Mail\Mail You've Sent\If you love your daughter\Html Body'.

Name	Re	Fo	Ig	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	File Created
1 Html Body					0	Folder						

Properties View (Selected Item: Html Body)

Name	Html Body
Logical Size	0
Category	Folder
Is Indexed	*
Item Path	chaser1191\Chaser1191\Mail\Mail You've Sent\If you love your daughter\Html Body
True Path	Hunter\chaser1191\Chaser1191\Mail\Mail You've Sent\If you love your daughter\Html Body
Description	Folder
Initialized Size	0
Physical Size	0
File Extents	0
Evidence File	File Carver
File Identifier	0
GUID	33a58f5e157ea689a772c51ea6d12b34
Attributes	*

Figure 46:

Screenshot of the File Carver software interface showing a file search results table and a file preview pane.

The left sidebar displays a tree view of the analyzed files:

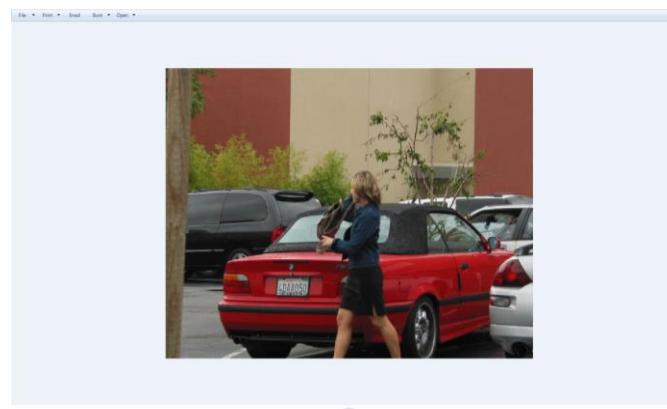
- Hunter XP
 - C
 - Outbox.dbx
 - Emailing- 103-0356_IMG.zip
 - Hotmail - Deleted Items.dbx
 - Web Site
 - Billy.dbx
 - Web Site
 - 101-0188.IMG.JPG
 - 101-0192.IMG.JPG
 - 101-0192.IMG.JPG
 - 101-0195.IMG.JPG
 - 102-0206.IMG.JPG
 - 102-0212.IMG.JPG
 - 102-0226.IMG.JPG
 - 102-0244.IMG.JPG
 - 102-0271.IMG.JPG
 - 102-0283.IMG.JPG
- Global.exe

The main area shows a table of found files:

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	Cr
00006432_101-0192_IMG.JPG_FO-2.mp3	m...	4,096	Multimedia	Match	MPEG Audio				
00006433_101-0192_IMG.JPG_FO-1132.m...	m...	4,096	Multimedia	Match	MPEG Audio				
00006434_101-0192_IMG.JPG_FO-12.tif	tif	4,096	Picture	Match	TIFF Image				
00006435_101-0192_IMG.JPG_FO-38379.flc	flc	4,096	Multimedia	Match	Animator P...				

The bottom status bar shows the path: Hunter Work\Billy.dbx\Web Site\101-0192.IMG.JPG\101-0192.IMG.JPG\00006432_101-0192_IMG.JPG_FO-2.mp3 (FO 0 LE 0)

Figure 47:



Run Relevant Keyword Searches:

Figure 48:

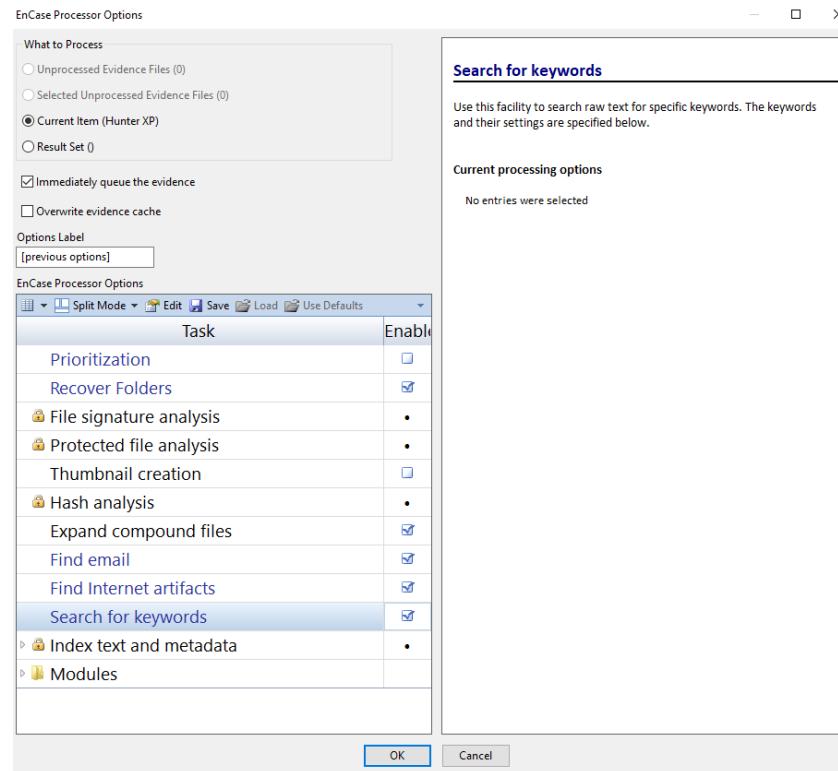


Figure 49:

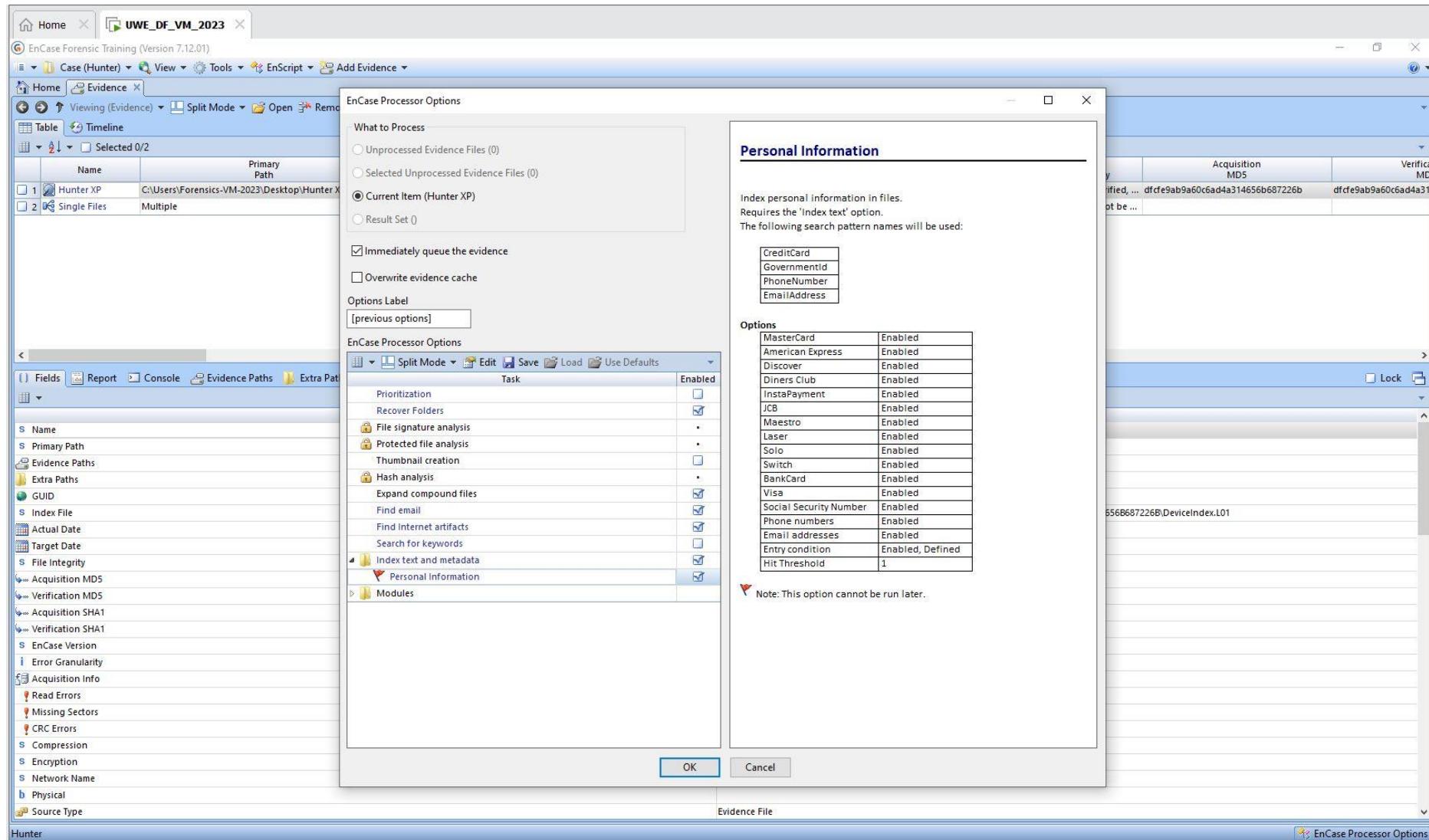


Figure 50:

The screenshot shows the EnCase Forensic Training interface (Version 7.12.01) with the title bar "UWE_DF_VM_2023". The main window displays search results for the term "stalker".

Search Results Table:

Name	File Ext	Logical Size	Item Type	Category	Signature Analysis	File Type	File Type Tag	Protected	Protection complexity	Last Accessed
stalk[2].html	html	33,463	Document	Document	Match	HyperText Mar...	htm			
media[1].html	html	32,673	Document	Document	Match	Web Page	ht10			
login_title_logo[1].gif	gif	2,311	Entry	Picture	Match	GIF	gif			31/03/02 09:25:43
media[1].html	html	32,673	Entry	Document	Match	Web Page	ht10			04/06/02 19:40:22
stalk[2].html	html	33,463	Entry	Document	Match	HyperText Mar...	htm			04/06/02 19:41:02
00022.SPL	SPL	643,244	Entry	Picture	Match	Windows Spo...	spl			04/06/02 19:41:03
nls302en.lex	lex	4,399,505	Entry	None	Unknown					28/02/02 16:01:37
Unallocated Clusters - 150		28,274,688	Entry	Unknown						
Unallocated Clusters - 58		28,274,688	Entry	Unknown						
Unallocated Clusters - 57		28,274,688	Entry	Unknown						
Unallocated Clusters - 11		28,274,688	Entry	Unknown						
Unallocated Clusters - 5		28,274,688	Entry	Unknown						
Unallocated Clusters - 3		28,274,688	Entry	Unknown						
Unallocated Clusters - 2		28,274,688	Entry	Unknown						
Unallocated Clusters - 1		28,274,688	Entry	Unknown						

Search Statistics:

Word	Hits	Items
1 stalker	27	15
2 stalker's	61	41
3 stalkers	28	11
4 stalkers.htm	3	1

Details View:

The details view shows the content of the file "stalk[2].html":

```
The Stalker's Home Page; A Stalking We Go! Stalking -- Privacy -- Spying -- Snooping!
```

Bottom Navigation:

Glen L. Roberts
Full Disclosure
[\(New!\)](#) [Search](#)

Hunter\Internet\Internet Explorer (Windows)\Cache\HTML\stalk[2].html

Figure 51:

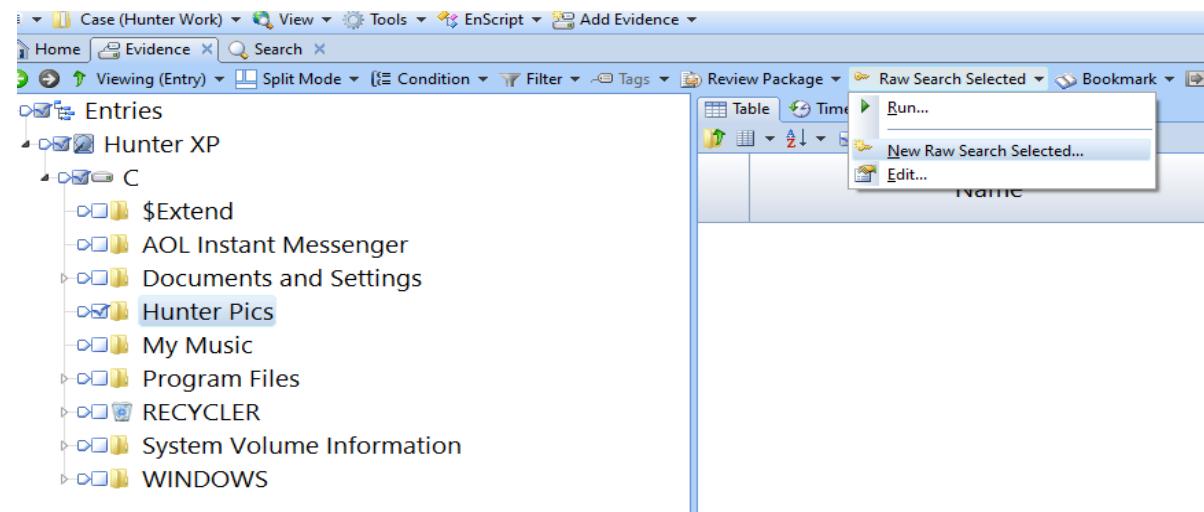
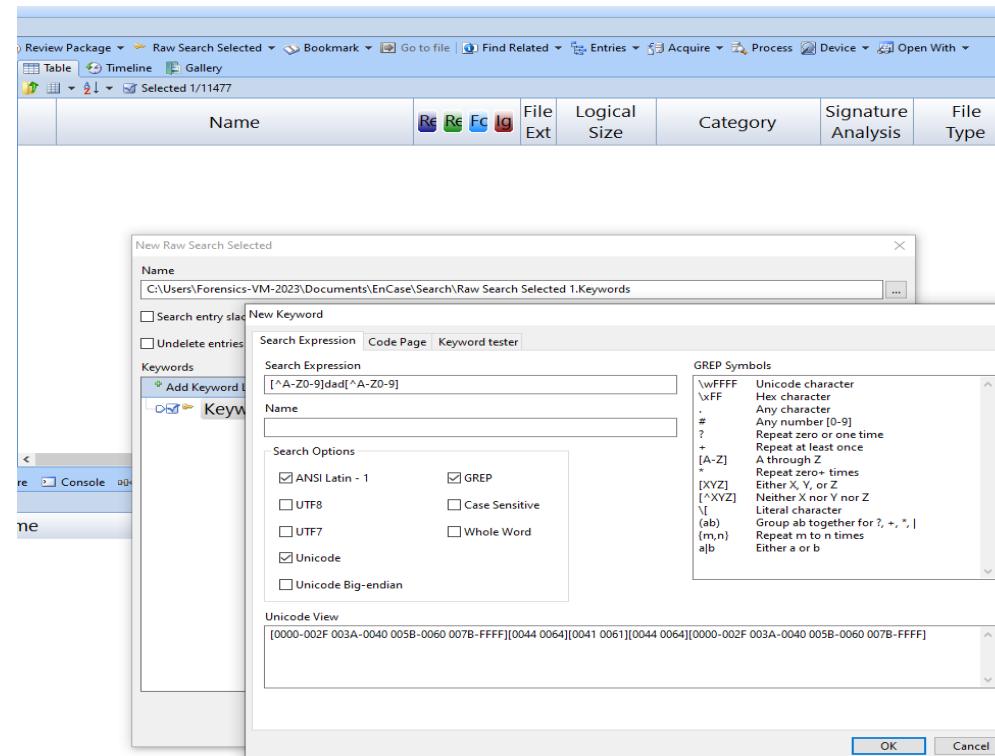


Figure 52:



Recover Log-On Passwords :

Figure 53:

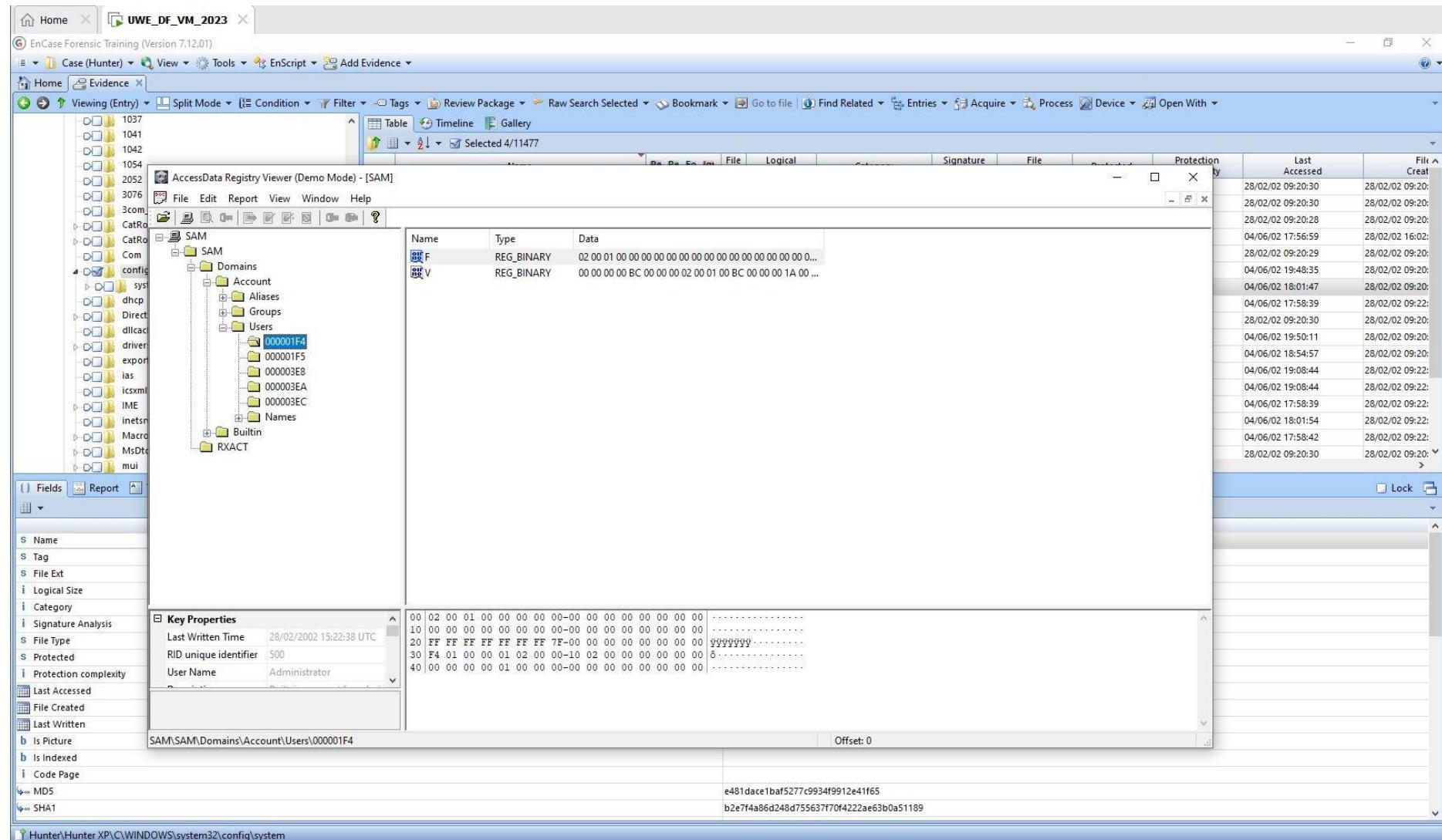
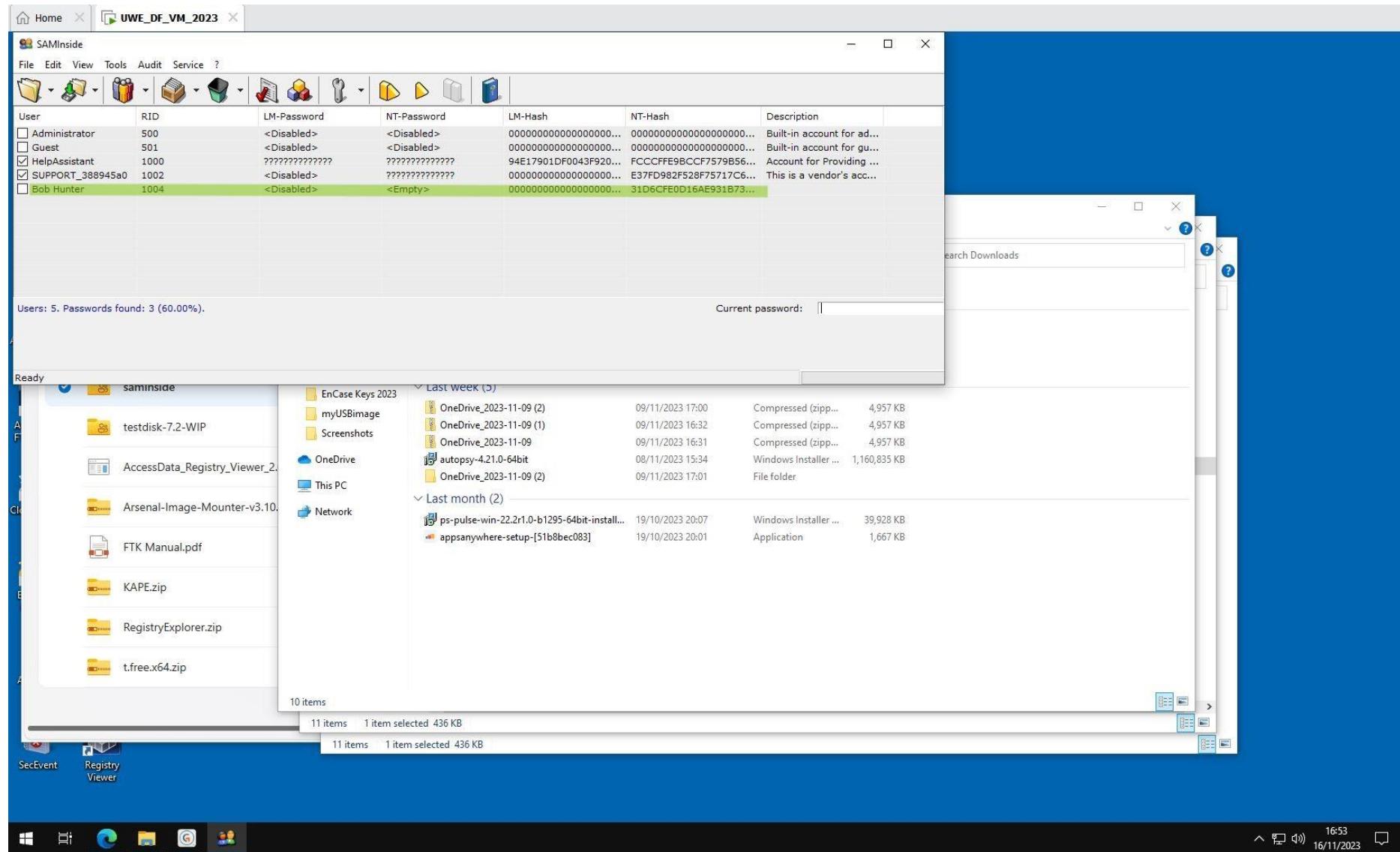


Figure 54:



Examine Different File Types :

Figure 55 :

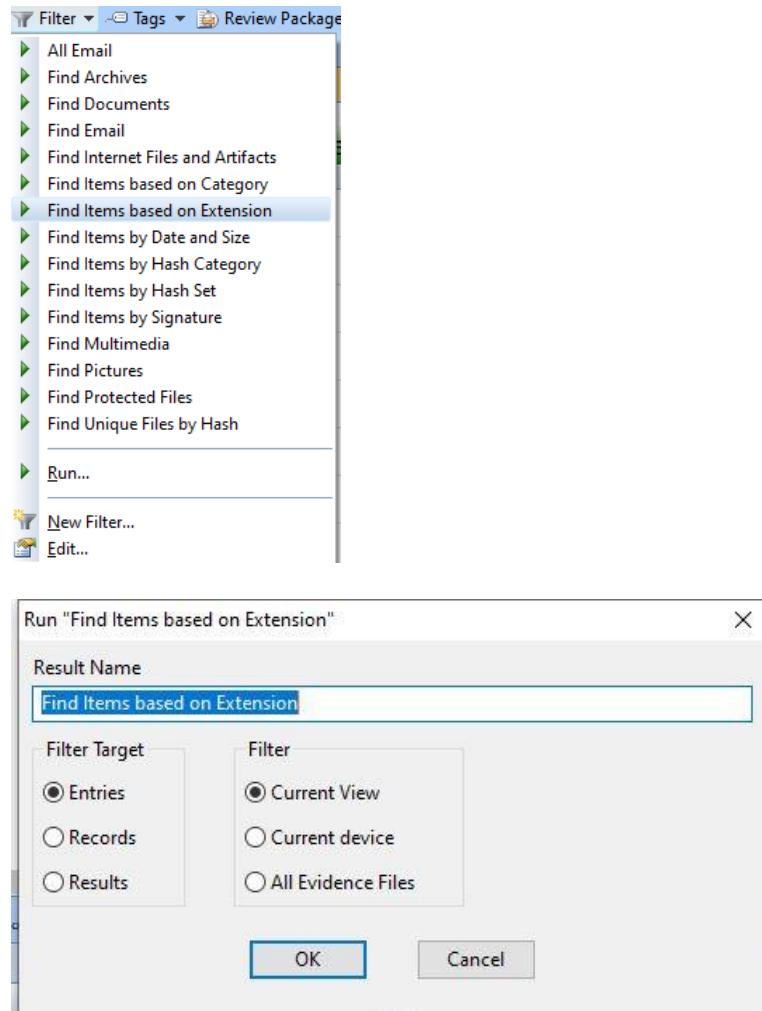


Figure 56 :

	Name	Comment	Start Sector	Sector offset	File Offset	Length	R R F Lc	File Ext	Logical Size	Item Type	Category	Signature Analysis	File Type	File Type Ta	Protected
1	102-0283_IMG[1].jpg		238,155	0				j...	3,044	Entry	Picture	Match	JPEG Im...	jpg1	
2	realplay.exe		1,887,0...					e...	26,112	Entry	Executable	Match	Windo...	exe	
3	cleanmgr.exe		195,707					e...	61,440	Entry	Executable	Match	Windo...	exe	

Encryption :

Figure 57 :

MD5	SHA1	Entropy	Item Path	True Path
6d0bd10dd99ae61ba6e8a1a3e697dfcd	fe2579b4229612fb8c84ac2e15a7bf0145cf8b	7.9963795	Hunter XP\c\windows\system32\oembios.bin	Hunter\Hunter XP\c\windows\system32\oembios.bin File, Arc
65c060c845d96ac4108e9b3491092698	9a418b2767b846683c58a9c387e6d04f2678a735	7.9867383	Hunter XP\c\RECYCLER\S-1-5-21-1229272821-158081..	Hunter\Hunter XP\c\RECYCLER\S-1-5-21-1229272821.. File, Rec
8b14674e76e3e294a4b43dee43a3572	4791bf79ab6b9c6d9ff754d196356e0aabccf	7.9835133	Hunter XP\c\windows\Driver Cache\i386\driver.cab	Hunter\Hunter XP\c\windows\Driver Cache\i386\dr.. File, Arc
33a9b85910d694e395397d3a36a303e5	2de87117e149217c2d7e8aa2f406b32c3a9b928a	7.9648387	Hunter XP\c\Program Files\Yahoo!\Installs\ymgrise.exe	Hunter\Hunter XP\c\Program Files\Yahoo!\Installs\y.. File, Arc
5b2afc835438d57b2c4c150e83e31e	e35b593cfc448d1c70a02c3fb78d4e2bf7b19f	7.9588664	Hunter XP\c\windows\Help\article.chm	Hunter\Hunter XP\c\windows\Help\article.chm File, Arc
62f92db86d625312045034ab7623a	0adab13bfa6994af80d375a2f2d7d8ea9973a697	7.9565635	Hunter XP\c\AOL Instant Messenger\AIM.exe	Hunter\Hunter XP\c\AOL Instant Messenger\AIM.exe File, Arc
7fc59185630387b35fa9c95b9e76	bbf2482bd4ff6c2ec6af9d53df1f85166010556	7.9560701	Hunter XP\c\RECYCLER\S-1-5-21-1229272821-158081..	Hunter\Hunter XP\c\RECYCLER\S-1-5-21-1229272821.. File, Del
8dd0c523f95ef4b97233cba59a6e43fb	092e11c716d466b5d11aa1379bcc1db751e59c28	7.9498725	Hunter XP\c\Program Files\America Online 7.0\liti\Re..	Hunter\Hunter XP\c\Program Files\America Online 7... File, Arc
9 092e11c716d466b5d11aa1379bcc1db751e59c28	092e11c716d466b5d11aa1379bcc1db751e59c28	7.9498725	Hunter XP\c\Program Files\Real\RealPlayer\Setup\set..	Hunter\Hunter XP\c\Program Files\Real\RealPlayer\S.. File, Arc
10 1d315af206741f842157fc2c8fa7d8fe9a992f867	1d315af206741f842157fc2c8fa7d8fe9a992f867	7.9436942	Hunter XP\c\windows\PCHEALTH\HELPCTR\Binaries..	Hunter\Hunter XP\c\windows\PCHEALTH\HELPCTR.. File, Arc
11 1d315af206741f842157fc2c8fa7d8fe9a992f867	1d315af206741f842157fc2c8fa7d8fe9a992f867	7.9436942	Hunter XP\c\windows\PCHEALTH\HELPCTR\Packa..	Hunter\Hunter XP\c\windows\PCHEALTH\HELPCTR.. File, His
12 a08d12edc08b8a48d3b8a6b8d0ab0b	c81d3ca2e8aa89d0d4ae4b9971af0777738a2	7.9049100	Hunter XP\c\windows\Help\ntrart.chm	Hunter\Hunter XP\c\windows\Help\ntrart.chm File, Arc
13 401799e1ea3c939751d91034ed274b2	2abe8bae73d782268ea0051535be208d8ce94d6	7.8442154	Hunter XP\c\windows\Help\windows.chm	Hunter\Hunter XP\c\windows\Help\windows.chm File, Arc
14 9dc6cb9c9f8d6fa3d20b489eaecfb10c78916	9dc6cb9c9f8d6fa3d20b489eaecfb10c78916	7.8281468	Hunter XP\c\RECYCLER\S-1-5-21-1229272821-158081..	Hunter\Hunter XP\c\RECYCLER\S-1-5-21-1229272821.. File, Rec
15 3638bde21c53d85a99029bee600bc	bab7412376e0d7430c0e4b386704ea1bb5a68a6	7.8188840	Hunter XP\c\Program Files\Windows Media Player\Sk..	Hunter\Hunter XP\c\Program Files\Windows Media P... File, Arc
16 513e9ecc6a7e1362d9eff899c0b79	7d7770f6a4e43e558ccb99fa019c6ca120e3c	7.8011504	Hunter XP\c\Program Files\America Online 7.0\COMI..	Hunter\Hunter XP\c\Program Files\America Online 7... File, Arc
17 ef31c523f453d90878db89df38d5ea03	759a26354e35f6a9105c9c5117c04a659cac31b9	7.8008180	Hunter XP\c\windows\Help\windows.chq	Hunter\Hunter XP\c\windows\Help\windows.chq File, Arc

Figure 58 :

The screenshot shows a forensic analysis interface with several panes:

- Left pane (File Tree):** Displays a hierarchical file tree of the analyzed system. Key nodes include:
 - Windows Media Player
 - Windows NT
 - WindowsUpdate
 - xerox
 - Yahoo! (with sub-nodes: Installs, Messenger)
 - RECYCLER (with sub-nodes: S-1-5-21-1229272821-1580818891-854245398-1004, Install ICQ, Palm, My Music, X Drive, Sabrina Dewercs)
 - System Volume Information
 - WINDOWS (with sub-nodes: \$NtUninstallQ309521\$, \$NtUninstallQ311889\$, \$NtUninstallQ311967\$)
- Top right pane (Table View):** A table showing file analysis results. The columns are:

SHA1	Entropy	Item Path	True Path	Description	Is Delete	Mo
11466	7.9436...	Hunter XP\C\WINDOWS\PCHEALTH\HELP...	Hunter Work\Hunter XP\C\WINDOWS\PCH...	File, Archive		28/02/02
11467	7.9436...	Hunter XP\C\WINDOWS\PCHEALTH\HELP...	Hunter Work\Hunter XP\C\WINDOWS\PCH...	File, Hidden, System,...		28/02/02
11468	7.9498...	Hunter XP\C\Program Files\Real\RealPlayer\...	Hunter Work\Hunter XP\C\Program Files\Re...	File, Archive		31/03/02
11469	7.9498...	Hunter XP\C\Program Files\America Online ...	Hunter Work\Hunter XP\C\Program Files\A...	File, Archive		01/03/02
11470	7.9560...	Hunter XP\C\RECYCLER\S-1-5-21-12292728...	Hunter Work\Hunter XP\C\RECYCLER\S-1-5...	File, Deleted, Archive		03/06/02
11471	7.9565...	Hunter XP\CAOL Instant Messenger\AIM.e...	Hunter Work\Hunter XP\CAOL Instant Mes...	File, Archive		01/03/02
11472	7.9588...	Hunter XP\C\WINDOWS\Help\article.chm	Hunter Work\Hunter XP\C\WINDOWS\Help\...	File, Archive		28/02/02
11473	7.9648...	Hunter XP\C\Program Files\Yahoo!\Installs\...	Hunter Work\Hunter XP\C\Program Files\Ya...	File, Archive		14/05/02
11474	7.9835...	Hunter XP\C\WINDOWS\Driver Cache\386\...	Hunter Work\Hunter XP\C\WINDOWS\Driv...	File, Archive		28/02/02
11475	7.9867...	Hunter XP\C\RECYCLER\S-1-5-21-12292728...	Hunter Work\Hunter XP\C\RECYCLER\S-1-5...	File, Recycled, Archive		04/06/02
11476	7.9963...	Hunter XP\C\WINDOWS\system32\oembios...	Hunter Work\Hunter XP\C\WINDOWS\syste...	File, Archive		28/02/02
- Bottom pane (Hex View):** A hex dump of the file content. The left column shows memory addresses, and the right column shows the corresponding hex and ASCII data.

At the bottom of the interface, the status bar displays the path: Hunter Work\Hunter XP\C\RECYCLER\S-1-5-21-1229272821-1580818891-854245398-1004\Install ICQ\INSTICQ.exe (P5 1401031 LS 1400968 CL 350242 SO 0 FO 0 LE 1).

Print Artefacts :

Figure 59:

The screenshot shows the EnCase Forensic Training interface (Version 7.12.01) with the title bar "UWE_DF_VM_2023". The main window displays a table of print artifacts under the "Evidence" tab. The table has columns for Name, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and File Create. The table lists 17 entries, all of which are SPL files (Picture type, Match category, Windows Spooler file type). The last accessed times range from 04/06/02 19:00:57 to 04/06/02 19:10:56. The "File Ext" column shows various file extensions including SPL, SHD, and SHD. The "Category" column consistently shows "Match". The "Signature Analysis" column indicates "Windows Spooler". The "File Type" column shows "Windows Spooler". The "Protected" and "Protection complexity" columns are empty. The "Last Accessed" and "File Create" columns show the same timestamp for each entry.

	Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	File Create
1	FP00000.SPL	SPL	76,616	Picture	Match	Windows Spooler			04/06/02 19:00:57	04/06/02 19:00:57
2	FP00000.SHD	SHD	1,344	Windows	Match	Printer Spool1			04/06/02 19:00:58	04/06/02 19:00:58
3	00022.SPL	SPL	643,244	Picture	Match	Windows Spooler			04/06/02 19:41:03	04/06/02 19:41:03
4	00022.SHD	SHD	1,364	Windows	Match	Printer Spool1			04/06/02 19:41:04	04/06/02 19:41:04
5	00021.SPL	SPL	1,216,240	Picture	Match	Windows Spooler			04/06/02 19:22:24	04/06/02 19:22:24
6	00021.SHD	SHD	1,372	Windows	Match	Printer Spool1			04/06/02 19:22:25	04/06/02 19:22:25
7	00020.SPL	SPL	524,724	Picture	Match	Windows Spooler			04/06/02 19:18:31	04/06/02 19:18:31
8	00020.SHD	SHD	1,372	Windows	Match	Printer Spool1			04/06/02 19:18:31	04/06/02 19:18:31
9	00019.SPL	SPL	394,748	Picture	Match	Windows Spooler			04/06/02 19:18:10	04/06/02 19:18:10
10	00019.SHD	SHD	1,412	Windows	Match	Printer Spool1			04/06/02 19:18:11	04/06/02 19:18:11
11	00018.SPL	SPL	941,248	Picture	Match	Windows Spooler			04/06/02 19:11:37	04/06/02 19:11:37
12	00018.SHD	SHD	1,360	Windows	Match	Printer Spool1			04/06/02 19:11:37	04/06/02 19:11:37
13	00017.SPL	SPL	345,052	Picture	Match	Windows Spooler			04/06/02 19:10:57	04/06/02 19:10:57
14	00017.SHD	SHD	1,376	Windows	Match	Printer Spool1			04/06/02 19:10:57	04/06/02 19:10:57
15	00016.SPL	SPL	365,560	Picture	Match	Windows Spooler			04/06/02 19:10:57	04/06/02 19:10:57
16	00016.SHD	SHD	1,376	Windows	Match	Printer Spool1			04/06/02 19:10:57	04/06/02 19:10:57
17	00015.SPL	SPL	398,772	Picture	Match	Windows Spooler			04/06/02 19:10:56	04/06/02 19:10:56

Below the table, there is a large hex dump of a file, likely a printer spooler file, showing binary data and ASCII characters. The dump includes various control codes, file headers, and data blocks. The ASCII view shows some recognizable text and file structures.

Figure 60:

The screenshot shows the EnCase Forensic Training interface. The top menu bar includes Home, Case (Hunter), View, Tools, EnScript, Add Evidence, Home, Processor Manager, and Evidence. The Evidence tab is selected.

The main window displays a table of file search results. The columns are: Name, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and File Created. The table lists 17 entries, mostly SPL and SHD files, with various sizes and creation dates between 04/06/02 and 04/06/03.

Below the table, there is a large hex dump view of a file. The left side of the dump shows the file's structure with labels like 'Options', 'Codepage', 'Text Style', 'Find', 'Compressed View', and file offsets. The right side shows the raw hex data and its ASCII representation. The ASCII data contains various characters, including binary-like patterns and some readable text.

The status bar at the bottom shows the path: Hunter\Hunter XP\C\WINDOWS\system32\spool\PRINTERS\00018.SPL (PS 1437739 LS 1437676 CL 359419 SO 80 FO 80 LE 41).

Figure 61:

Screenshot of EnCase Forensic Training (Version 7.12.01) showing the Evidence view for the case "UWE_DF_VM_2023".

The left pane displays a file tree of the evidence volume, showing various system folders like DirectX, drivers, export, ias, icxml, IME, inetsrv, Macromed, MsDtc, mui, npp, oobe, ras, Restore, Setup, ShellExt, and spool. Within the spool folder, there are sub-folders for drivers, PRINTERS, prtprocs, usmt, wbem, and wins.

The main pane shows a table of 17 selected files from the spool\PRINTERS\00018.SPL file. The table includes columns for Name, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and File Create. The files are mostly SPL and SHD files, mostly Pictures, with sizes ranging from 76,616 to 398,772 bytes.

The bottom pane contains a detailed view of the file 00018.SPL, showing its contents. It includes a "View Types" section with options for Text, Picture, Base64 Encoded Picture, UUE Encoded Picture, Integers, Dates, and Windows. The "Picture" view is selected, displaying a message about a daughter's safety and a right-click option to display picture options. Below this is a photograph of a person in a library or bookstore looking at books on a shelf.

The status bar at the bottom indicates the path: Hunter\Hunter XP\C\WINDOWS\system32\spool\PRINTERS\00018.SPL (PS 1437739 LS 1437676 CL 359419 SO 80 FO 80 LE 41).

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	File Create
FP00000.SPL	SPL	76,616	Picture	Match	Windows Spool			04/06/02 19:00:57	04/06/02 19:00:57
FP00000.SHD	SHD	1,344	Windows	Match	Printer Spool1			04/06/02 19:00:58	04/06/02 19:00:58
00022.SPL	SPL	643,244	Picture	Match	Windows Spool			04/06/02 19:41:03	04/06/02 19:41:03
00022.SHD	SHD	1,364	Windows	Match	Printer Spool1			04/06/02 19:41:04	04/06/02 19:41:04
00021.SPL	SPL	1,216,240	Picture	Match	Windows Spool			04/06/02 19:22:24	04/06/02 19:22:24
00021.SHD	SHD	1,372	Windows	Match	Printer Spool1			04/06/02 19:22:25	04/06/02 19:22:25
00020.SPL	SPL	524,724	Picture	Match	Windows Spool			04/06/02 19:18:31	04/06/02 19:18:31
00020.SHD	SHD	1,372	Windows	Match	Printer Spool1			04/06/02 19:18:31	04/06/02 19:18:31
00019.SPL	SPL	394,748	Picture	Match	Windows Spool			04/06/02 19:18:10	04/06/02 19:18:10
00019.SHD	SHD	1,412	Windows	Match	Printer Spool1			04/06/02 19:18:11	04/06/02 19:18:11
00018.SPL	SPL	941,248	Picture	Match	Windows Spool			04/06/02 19:11:37	04/06/02 19:11:37
00018.SHD	SHD	1,360	Windows	Match	Printer Spool1			04/06/02 19:11:37	04/06/02 19:11:37
00017.SPL	SPL	345,052	Picture	Match	Windows Spool			04/06/02 19:10:57	04/06/02 19:10:57
00017.SHD	SHD	1,376	Windows	Match	Printer Spool1			04/06/02 19:10:57	04/06/02 19:10:57
00016.SPL	SPL	365,560	Picture	Match	Windows Spool			04/06/02 19:10:57	04/06/02 19:10:57
00016.SHD	SHD	1,376	Windows	Match	Printer Spool1			04/06/02 19:10:57	04/06/02 19:10:57
00015.SPL	SPL	398,772	Picture	Match	Windows Spool			04/06/02 19:10:56	04/06/02 19:10:56

Figure 62:

The screenshot shows a digital forensic analysis interface with a tree view of system folders on the left and a detailed file list on the right.

Left Panel (File System Tree):

- IME
- inetrv
- Macromed
- mui
- npp
- oobe
- ras
- Restore
- Setup
- ShellExt
- spool
 - drivers
 - PRINTERS** (selected)
 - prtprocs
- usmt
- wbem
- wins
- xircm
- Tasks
- Temp
- twain_32
- Web
- WinSxS

Right Panel (File List):

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	File Create
17 00008.SHD	SHD	1,432 Windows	Match	Printer Spool1				04/06/02 18:42:11	04/06/02 18:42
18 00006.SHD	SHD	1,432 Windows	Match	Printer Spool1				04/06/02 18:41:49	04/06/02 18:41
19 00007.SHD	SHD	1,432 Windows	Match	Printer Spool1				04/06/02 18:42:02	04/06/02 18:42
20 00009.SHD	SHD	1,432 Windows	Match	Printer Spool1				04/06/02 18:42:49	04/06/02 18:42
21 00009.SPL	SPL	80,792 Picture	Match	Windows Sp...				04/06/02 18:42:49	04/06/02 18:42
22 00019.SHD	SHD	1,412 Windows	Match	Printer Spool1				04/06/02 19:18:11	04/06/02 19:18
23 00014.SPL	SPL	72,684 Picture	Match	Windows Sp...				04/06/02 19:04:13	04/06/02 19:04
24 00020.SHD	SHD	1,372 Windows	Match	Printer Spool1				04/06/02 19:18:31	04/06/02 19:18
25 00021.SHD	SHD	1,372 Windows	Match	Printer Spool1				04/06/02 19:22:25	04/06/02 19:22
26 00017.SHD	SHD	1,376 Windows	Match	Printer Spool1				04/06/02 19:10:57	04/06/02 19:10
27 00022.SHD	SHD	1,364 Windows	Match	Printer Spool1				04/06/02 19:41:04	04/06/02 19:41
28 00016.SHD	SHD	1,376 Windows	Match	Printer Spool1				04/06/02 19:10:57	04/06/02 19:10
29 00011.SHD	SHD	1,368 Windows	Match	Printer Spool1				04/06/02 18:58:50	04/06/02 18:58
30 00015.SHD	SHD	1,376 Windows	Match	Printer Spool1				04/06/02 19:10:56	04/06/02 19:10
31 00018.SHD	SHD	1,360 Windows	Match	Printer Spool1				04/06/02 19:11:37	04/06/02 19:11
32 00014.SHD	SHD	1,368 Windows	Match	Printer Spool1				04/06/02 19:04:37	04/06/02 19:04
33 00013.SHD	SHD	1,364 Windows	Match	Printer Spool1				04/06/02 19:02:52	04/06/02 19:02

Bottom Panel (Details):

- Fields
- Report
- Text
- Hex
- Decode
- Doc
- Transcript
- Picture
- Console
- File Extents
- Permissions
- Hash Sets
- Attributes

Bottom Status Bar:

Hunter\Hunter XP\C\WINDOWS\system32\spool\PRINTERS\00018.SHD (PS 64539 LS 64476 CL 16119 SO 80 TO 0 LE 0)

CD/DVD burning apps:

Figure 63:

The screenshot shows the EnCase Forensic Training interface. The left pane displays a tree view of 'Entries' under 'Hunter XP\c'. The right pane shows a table of search results with columns: Name, File Ext, Logical Size, Category, Signature Analysis, File Type, Protected, Protection complexity, Last Accessed, and C. The table lists various files found, such as http://plus.xdrive.com-XDRequestDispatcheraction..., htwpb5a82dc4[1].htm, and Hunter.terminal.lnk. The bottom of the screen has a toolbar with various forensic analysis tools.

Name	File Ext	Logical Size	Category	Signature Analysis	File Type	Protected	Protection complexity	Last Accessed	C
4588 http--plus.xdrive.com-XDRequestDispatcheraction...	url	568 Windows	Bad signature					04/06/02 18:21:27	04/06/02 18:21:27
4589 http260.dll	dll	121,344 Library	Match	Dynamic Link ...				04/06/02 18:01:46	01/03/02 01:00
4590 hui.dll	dll	39,936 Library	Match	Dynamic Link ...				28/02/02 16:00:55	23/08/01 00:00
4591 htwpb5a82dc4[1].htm	htm	22,651 Document	Match	Web Page				31/03/02 08:42:14	31/03/02 08:42:14
4592 hu[1].gif	gif	816 Picture	Match	GIF				31/03/02 19:20	31/03/02 19:20
4593 Humor.ico	ico	4,710 Picture	Match	Windows Icon				03/06/02 16:13:33	03/06/02 16:13:33
4594 Humor.ssf	ssf	1,350 None	Unknown					03/06/02 11:40:50	03/06/02 11:40:50
4595 Hunter Pics	48 Folder		Unknown					04/06/02 19:47:12	14/05/02 14:00
4596 Hunter Pics	4,096 Folder		Unknown					04/06/02 19:40:00	04/06/02 19:40:00
4597 Hunter Pics	147,456 Folder		Unknown					04/06/02 19:49:16	03/06/02 17:00
4598 Hunter.Pics.lnk	Ink	588 Windows	Match	Windows File ...				03/06/02 17:45:52	14/05/02 14:00
4599 Hunter.log	log	1,490 Document	Match	Log				14/05/02 12:27:03	14/05/02 12:27:03
4600 Hunter.log.lnk	Ink	863 Windows	Match	Windows File ...				14/05/02 12:12:59	14/05/02 12:12:59
4601 HunterB	4,096 Folder		Unknown					04/06/02 19:49:16	14/05/02 14:00
4602 HunterTerminal.lnk	Ink	784 Windows	Match	Windows File				14/05/02 13:05:04	14/05/02 13:05:04

Validate Evidence Integrity At The End Of The Examination:

Figure 64:

S	File Integrity	Completely Verified, 0 Errors
↳»	Acquisition MD5	dfcfe9ab9a60c6ad4a314656b687226b
↳»	Verification MD5	dfcfe9ab9a60c6ad4a314656b687226b