

CSE 805 MID 2 (LAB exam)

Lab 04: Windows Registry Analysis (using Autopsy)

REGISTRY

What we need: Autopsy, Analyzing Image

Questions?

1. Find out the computer name?
2. Current version of windows?
3. User accounts?
4. Find out the time zone?
5. Find out the IP address?
6. Find out the mounted devices?

Note: The main system registry files most often viewed by examiners are:

- System
- Security
- Software
- SAM

Ans to the Q: No: 1

/img_Lab Image.E01/WINDOWS/system32/config/

SYSTEM > ControlSet001 > Control > ComputerName

Computer Name:

The screenshot shows the Autopsy Forensic Browser interface. The left sidebar displays a tree view of the registry keys under 'Data Sources' for 'Lab Image.E01_1 Host' and 'Lab Image.E01'. The 'Windows (38)' key is selected. The main pane shows a table of registry keys under 'System32/config'. One key, 'ComputerName', is highlighted with a red box. The details pane at the bottom shows the metadata for 'ComputerName' and its values. The value '(Default)' has a red box around it, and its value is listed as 'REG_SZ: IACIS-HDD-2014'.

Name	S	C	O	Modified Time	Change Time	Access Time	Created Time	Size	Flags(Dir)	Flags(Meta)
SAM.LOG1	X			2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	58368	Unallocated	Unallocated
SAM.LOG2				2015-05-26 19:05:11 BDT	2015-05-26 19:05:11 BDT	2015-05-26 19:05:11 BDT	2015-05-26 19:05:11 BDT	0	Allocated	Allocated
SECURITY.LOG				0	2015-05-26 19:05:10 BDT	2015-05-26 19:05:10 BDT	2015-05-26 19:05:10 BDT	262144	Allocated	Allocated
SECURITY.LOG1				0	2015-05-26 19:05:10 BDT	2015-05-26 19:05:10 BDT	2015-05-26 19:05:10 BDT	1024	Allocated	Allocated
SECURITY.LOG2	X			2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	2015-05-26 18:52:41 BDT	21504	Allocated	Allocated

Metadata for 'ComputerName':
Name: ComputerName
Number of subkeys: 0
Number of values: 2
Modification Time: 2014-01-25 04:24:31 GMT+0:00

Values:
Name Type Value
(Default) REG_SZ: IACIS-HDD-2014
ComputerName REG_SZ: IACIS-HDD-2014

Ans to the Q: No: 2

Current version of the windows:

The screenshot shows the Autopsy interface with the 'Operating System Information' tab selected. The results table shows one entry for 'Lab Image.E01'. The 'Program Name' field is highlighted with a red box, showing 'Windows 7 Ultimate Service Pack 1'.

Source Name	S	C	O	Name	Program Name	Processor Architecture	Temporary Files Directory	Path	Product ID	Owner	Data Source
Lab Image.E01	IACIS-HDD-2014				Windows 7 Ultimate Service Pack 1	AMD64	%SystemRoot%\TEMP	C:\Windows	00426-292-0000007-85946	BillyBob	Lab Image.E01

Below the table, the 'Operating System Information' pane displays detailed OS information, including the program name 'Windows 7 Ultimate Service Pack 1'.

Or,

/img_Lab Image.E01/WINDOWS/system32/config/

SOFTWARE > Microsoft > Windows NT > CurrentVersion

The screenshot shows the Autopsy interface with the registry tree expanded to show the 'CurrentVersion' key under 'Software\Microsoft\Windows NT\CurrentVersion'. The 'EditionID' value is highlighted with a red box, showing 'Ultimate'.

Name	Type	Value
CurrentVersion	REG_SZ	7601
EditionID	REG_SZ	Ultimate
ProductName	REG_SZ	Windows 7 Ultimate

Ans to the Q: No: 3

/img_Lab Image.E01/WINDOWS/system32/config/

SYSTEM > ControlSet001 > Control > TimeZoneInformation

Time Zone:

The screenshot shows the Autopsy 4.21.0 interface with the 'Data Sources' tree on the left and a table view on the right. The table view has columns for Name, S, C, O, Modified Time, Change Time, Access Time, Created Time, Size, Flags(Dir), and Flags(Meta). A red box highlights the 'TimeZoneInformation' key under the 'SECURITY\LOG1' registry key. The 'SECURITY' key is also highlighted with a red box.

Name	S	C	O	Modified Time	Change Time	Access Time	Created Time	Size	Flags(Dir)	Flags(Meta)
SECURITY	0	2015-05-26 19:05:10 BDT	262144	Allocated	Allocated					
SECURITY\LOG1	0	2015-05-26 19:05:10 BDT	1024	Allocated	Allocated					
SECURITY\LOG1\TimeZoneInformation	0	2015-05-26 19:05:10 BDT	21504	Allocated	Allocated					

Ans to the Q: No: 4

/img_Lab Image.E01/WINDOWS/system32/config/

SYSTEM\ControlSet001\services\tcpip\parameters\interfaces\{GUID\}

IP Address:

testy - Autopsy 4.2.1.0

Case View Tools Window Help

Add Data Source Images/Videos Communications Geolocation Timeline Discovery Generate Report Close Case Keyword Lists Keyword Search

Listing /img_Lab Image.E01/Windows/System32/config

Table Thumbnail Summary

Save Table as CSV

51 Results

Name S C O Modified Time Change Time Access Time Created Time Size Flags(Dir) Flags(Meta)

SOFTWARELOG1 1 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 262144 Allocated

SOFTWARE.LOG1 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 262144 Unallocated

SOFTWARE.LOG2 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 0 Allocated

SYSTEM 0 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 11796480 Allocated

SYSTEM.LOG 0 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 1024 Allocated

SYSTEM.LOG1 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 262144 Allocated

Hex Text Application File Metadata OS Account Data Artifacts Analysis Results Context Annotations Other Occurrences

Parameters Adapters DNSRegisteredAdapters PersistentRoutes Winsock SyncDomainWithMembership NetworkName DatabasePath NameServer ForwardBroadcasts IPEnableRouter Domain Hostname SearchList

Metadata Name: {70A209B4-F8B9-43C7-8BBA-F96E0BBC2185} Number of subkeys: 0 Number of values: 25 Modification Time: 2014-02-19 17:19:43 GMT+0:00

Values Name Type Value

UseZeroBroadcast REG_DWORD 0x00000000 (0)

EnableDeadGWDetect REG_DWORD 0x00000001 (1)

EnableDHCP REG_DWORD 0x00000001 (1)

NameServer REG_SZ (value not set)

Domain REG_SZ (value not set)

RegistrationEnabled REG_DWORD 0x00000001 (1)

DhcpIpAddress REG_SZ 192.168.0.170

DhcpSubnetMask REG_SZ 255.255.255.0

DhcpServer REG_SZ 192.168.0.1

Lease REG_DWORD 0x00000a80 (43200)

Ans to the Q: No: 5

/img_Lab Image.E01/WINDOWS/system32/config/

SYSTEM\MountedDevices

testy - Autopsy 4.2.1.0

Case View Tools Window Help

Add Data Source Images/Videos Communications Geolocation Timeline Discovery Generate Report Close Case Keyword Lists Keyword Search

Listing /img_Lab Image.E01/Windows/System32/config

Table Thumbnail Summary

Save Table as CSV

51 Results

Name S C O Modified Time Change Time Access Time Created Time Size Flags(Dir) Flags(Meta)

SOFTWARELOG1 1 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 262144 Allocated

SOFTWARE.LOG1 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 2015-05-26 18:52:41 BDT 262144 Unallocated

SOFTWARE.LOG2 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 0 Allocated

SYSTEM 0 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 11796480 Allocated

SYSTEM.LOG 0 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 2015-05-26 19:05:11 BDT 1024 Allocated

SYSTEM.LOG1 0 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 2015-05-26 19:05:10 BDT 262144 Allocated

Hex Text Application File Metadata OS Account Data Artifacts Analysis Results Context Annotations Other Occurrences

(DosDevices)\H: (DosDevices)\I: (DosDevices)\J: (DosDevices)\K: (DosDevices)\L:

Value

0x0 5F 00 3F 00 3F 00 5F 00 55 00 53 00 53 00 1_<7.7...> S.

0x10 54 00 4F 00 52 00 23 00 44 00 69 00 73 00 6B 00 T.O.R.F.D.I.s.k.

0x20 26 00 56 00 65 00 6E 00 5F 00 4C 00 45 00 58 00 &V.R.n...L.E.X.

0x30 41 00 52 00 26 00 50 00 72 00 6F 00 64 00 52 00 A.R.s.P.r.o.d._

0x40 44 00 55 00 40 00 50 00 44 00 49 00 56 00 J.O.R.E.D.R.I.V.

0x50 45 00 52 00 52 00 45 00 55 00 50 00 52 00 E.R.R.e.v._1..

0x60 23 00 32 00 30 00 30 00 34 00 35 00 32 00 2.0.4.1.1.4.5.2.

0x70 39 00 31 00 38 00 31 00 31 00 30 00 30 00 9.1.1.1.1.0.0.0.

0x80 26 00 33 00 23 00 7B 00 35 00 33 00 66 00 35 00 &0.4.1.5.3.1.2.5.

0x90 36 00 33 00 30 00 37 00 2D 00 62 00 36 00 62 00 6.3.0.7.1.b.6.b.

0xA0 66 00 2D 00 31 00 31 00 64 00 30 00 2D 00 39 00 1_<1.1.d.0...>

0xB0 34 00 66 00 32 00 2D 00 30 00 30 00 61 00 30 00 4.1.2...0.0.a.0.

0xC0 63 00 39 00 31 00 65 00 66 00 62 00 38 00 62 00 C.9.1.e.f.b.8.b.

0xD0 77 00

More:

Operating System:

/img_Lab Image.E01/WINDOWS/system32/config/

SOFTWARE > Microsoft > Windows NT > Current Version

The screenshot shows the Autopsy 4.21.0 interface with the file system browser on the left and a detailed view of the registry key 'Windows NT\CurrentVersion\config' on the right. The 'EditionID' value is highlighted with a red box.

Name	Type	Value
CurrentVersion	REG_SZ	6.1
CurrentUId	REG_SZ	7601
ServiceType	REG_SZ	System
CurrentType	REG_SZ	Multiprocessor Free
InstallDate	REG_DWORD	0x3c31312 (1390613266)
RegisteredOrganization	REG_SZ	(value not set)
RegisteredOwner	REG_SZ	BillyBob
SystemRoot	REG_SZ	C:\Windows
InstallationType	REG_SZ	Client
EditionID	REG_SZ	Ultimate
ProductName	REG_SZ	Windows 7 Ultimate

Installed Applications:

/img_Lab Image.E01/WINDOWS/system32/config/

SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths

The screenshot shows the Autopsy 4.21.0 interface with the file system browser on the left and a detailed view of the registry key 'Windows\CurrentVersion\App Paths'. The 'AcroRd32.exe' entry under 'App Paths' is highlighted with a red box.

Name	Type	Value
SM_GamesName	REG_SZ	Game
SM_ConfigureProgramsName	REG_SZ	Set Program Access and Defaults
CommonFilesDir	REG_SZ	C:\Program Files\Common Files
CommonFilesDir(x86)	REG_SZ	C:\Program Files(x86)\Common Files
CommonV64S32Dir	REG_SZ	C:\Program Files\Common Files
DevicePath	REG_EXPAND_SZ	%SystemRoot%\inf
MediaPathUnexpanded	REG_EXPAND_SZ	%SystemRoot%\Media
ProgramFilesDir	REG_CZ	C:\Program Files
ProgramFilesDir(x86)	REG_CZ	C:\Program Files(x86)
ProgramFilesPath	REG_EXPAND_SZ	%ProgramFiles%
ProgramV64S32Dir	REG_SZ	C:\Program Files

SAM (Security Accounts Manager):

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SAM/Domains/Account/Users/Names/

The screenshot shows the Autopsy interface with the following details:

- File System Tree:** Shows the directory structure of the Windows System32/config folder, including subfolders like SAM, SAM.LOG, SAM.LOG1, and SAM.LOG2.
- Table View:** A list of entries from the SAM database. One entry for the 'SAM' account is highlighted with a red box. The table includes columns: Name, S, C, O, Modified Time, Change Time, Access Time, Created Time, Size, Flag(Dir), and Flag(Meta).
- Hex Editor:** Shows the raw hex data for the SAM account entry.
- Text Editor:** Shows the text-based representation of the SAM account entry.
- Application View:** Shows the Windows registry structure under the SAM key, specifically the 'Users' subkey which contains entries for Administrator, BillyBob, Guest, HomeGroupUser\$, Jimmy Wilson, Sgt. Joe T. Nameless, and (Default).
- File Metadata:** Shows file metadata for the SAM file.
- OS Account:** Shows the OS account information for the SAM entry.
- Annotations:** Shows annotations for the SAM entry.
- Other Occurrences:** Shows other occurrences of the SAM entry across the case.

Recent documents: Search keyword > NTUSER.DAT

/img_Lab Image.E01/WINDOWS/system32/config/

NTUSER.DAT/Software/Microsoft/Windows/CurrentVersion/Explorer/RecentDocs/

The screenshot shows the Autopsy interface with the following details:

- File System Tree:** Shows the directory structure of the Windows System32/config folder, including subfolders like inf, SAM, and ntuser.dat.LOG1.
- Table View:** A list of entries from the NTUSER.DAT database. One entry for 'RecentDocs' is highlighted with a red box. The table includes columns: Name, Keyword Preview, Location, Modified Time, Change Time, and a 'Save Table as CSV' button.
- Hex Editor:** Shows the raw hex data for the RecentDocs entry.
- Text Editor:** Shows the text-based representation of the RecentDocs entry.
- Application View:** Shows the Windows registry structure under the NTUSER.DAT key, specifically the 'RecentDocs' subkey which contains entries for MRUListEx, PDF, TXT, XLS, and Folder.
- File Metadata:** Shows file metadata for the NTUSER.DAT file.
- OS Account:** Shows the OS account information for the RecentDocs entry.
- Annotations:** Shows annotations for the RecentDocs entry.
- Other Occurrences:** Shows other occurrences of the RecentDocs entry across the case.

Questions?

- **BillyBob user account creation date?**
- **BillyBob last login time?**
- **Did BillyBob try to reset the password of the other user?**

The location of the Event Logs:
WINDOWS\system32\winevt\Logs