



## Computer Examinations

- Assemble and disassemble laptops and desktops to gain access to the hard disk drive (HDD) or solid state drive (SSD).
- Use write-blocking hardware and software to ensure no changes are made to evidence during imaging process.
- Forensically image laptop and desktop HDDs using EnCase Acquisition, Voom Hardcopy, FTK Imager, and LogiCube Forensic Dossier or Forensic Falcon.
- Maintain Chain of Custody documentation.
- Use EnCase, Internet Evidence Finder, Forensic Explorer, and NetAnalysis to examine forensic images (E01, L01, DD, etc.) and Virtual Hard Drives (VHD, VMDK).
- Examine system events to determine user behavior.
- Examine Internet history to determine user actions online.
- Examine Windows registry to determine user activity on the file system.
- Determine the cause of specific events based on the contextual evidence.
- Report findings and professional opinion on evidence in question.
- Review torrent file logs to determine file requests from specified IP address.
- Perform bit-level searches for file headers/footers for data carving purposes

## Cell Phone Extraction

- Image Android cell phones and Apple iPhones.
- Ensure no changes made to phone prior to acquisition.
- Examine and extract SMS, MMS message data.
- Examine and extract picture, video, voice, and web data.
- Provide information about picture metadata.
- Perform keyword searches for specific messages or web data.
- Perform ADB extractions via command line in Windows

## Data Recovery

- Image a RAID system through a network connection using EnCase.
- Image and organize multiple drives in RAID separately.
- Reconstruct RAID using forensic software.
- Extract and mount virtual backups from a forensic image file.
- Locate and extract specific files.
- Maintain spreadsheet containing dates/times of backups and specified files.

## **EXPERIENCE WITH:**

### Software

- EnCase (v6, 7, 8)
- Access Data FTK Imager
- Magnet Forensics Internet Evidence Finder
- Forensic Explorer
- Net Analysis and History Extractor
- Cellebrite UFED Physical Analyzer
- Android Debug Bridge (ADB)
- Microsoft Office
- Windows OS (XP, Vista, 7, 8, 8.1, 10)
- VMWare Workstation

## Hardware

- Desktop and laptop hardware (HDDs, assembly/disassembly)
- Smart phones (iPhone and Android)
- Logicube Forensic Dossier/Falcon
- Tableau T35i Writeblocker
- Voom Hardcopy (2 and 3)
- Cellebrite UFED Touch and Touch 2

## **PROFESSIONAL DEVELOPMENT:**

CEIC 2015 and EnFuse 2016, 2017 Las Vegas, NV:

- Took several courses to stay current on forensic software and procedures.
- Communicate with other members of the digital forensic community.
- Passed Phase 1 of EnCE certification test, currently on Phase 2.

2014 Senior Capstone (Final Thesis)

- Formulate a way to test creation and modification of shellbag artifacts.
- Test tools to determine reliability of results and compatibility with Windows 10.
- Determine the activity related to Windows 10 shellbags.
- Compare findings to those of previous versions of Windows.
- Determine the forensic value of these artifacts.

Training at Cyber Agents, Inc. (2015-Present):

- Develop and implement testing for WinMX (P2P software)
- Receive training from Trent Struttman and Eric Lakes regarding the examination of Limewire forensic artifacts
- Update educational material to better reflect the current trends in information technology
- Research on white papers and case studies involving data relevant to current cases
- Utilize and research methods of extracting data from specific model cell phones