

DEUSOP13 – Live Imaging a Device

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1. Scope

- 1.1. This standard operating procedure addresses how to image a device “live” or while the device is turned on and functioning.

2. Background

- 2.1. To establish the practices for documenting the examination of evidence to conform to the requirements of the Department of Forensic Sciences (DFS) Forensic Science Laboratory (FSL) *Quality Assurance Manual*, the accreditation standards under ISO/IEC 17025:2005, and any supplemental standards.

3. Safety

- 3.1. If necessary due to the conditions of the device or the environment where the imaging process will take place, wear personal protective equipment (e.g., lab coat, gloves, mask, eye protection), when carrying out standard operating procedures.

4. Materials Required

- 4.1. Imaging software, storage media, connection materials, such as cables or a hard drive dock, software/hardware write blocker.

5. Standards and Controls

- 5.1. Not applicable

6. Calibration

6.1. Not applicable

7. Procedures

7.1. On first examining the digital device, observe and document the following, if applicable:

- Operating system(s)
- Number of drives in the system
- System configuration (ex: RAID)
- Connection to network (network cable or wireless)
- Ensure there is no encryption service running,
- Number and types of interfaces available on the digital device.

7.2. If device is connected to a network via a network cable, remove the network cable. If device is connected to the network via a wireless interface, disable network connection or turn off wireless access. Document action taken on acquisition form.

7.3. If business continuity must be maintained or the network connection is part of the investigation, leave network connection.

7.4. Record and document any processes and applications open and running. Example: QuickBooks accounting software is open and running on the system. Documentation can be done via photography and/or documentation on the appropriate acquisition form.

7.5. For memory/RAM acquisition, connect memory collection device/tool/software/connection (i.e. Netcat to an open port). Collect RAM according to software/device protocols, saving to prepared storage media.

7.6. Determine from observations and documentation, the best imaging software and hardware solution. If necessary, consult the technical leader for guidance.

7.7. Acquire the device using the hardware/software solution. Ensure that a write blocker is used, when possible.

8. Sampling

8.1. Not applicable

9. Calculations

9.1. Not applicable

10. Uncertainty of Measurement

10.1. Not applicable

11. Limitations

11.1. Due to damage or other factors, some or all of the above examinations might not be possible. It is at the discretion of the analyst as to what examinations are necessary and if they should be conducted.

12. Documentation

12.1. DEUF02 Digital Device Acquisition Form

12.2. DEUF05 Forensic Examination Form

13. References

13.1. Forensic Science Laboratory Quality Assurance Manual, (Current Version).

13.2. FSL Departmental Operations Manuals, (Current Versions).

13.3. FSL Laboratory Operations Manuals, (Current Versions).

13.4. Digital Evidence Unit Quality Assurance Manual, (Current Version).

13.5. SWGDE Capture of Live Systems, (2014 September 5).