Linux Forensics

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Certifications:
http://www.securitytube-training.com

Pentester Academy: http://www.PentesterAcademy.com

Making Filesystem Images

High Level Process

Call Placed → Incident? — Yes → Live Analysis → Dead Analysis? — Yes → Acquire Images

Incident? — No → Lessons Learned

Dead Analysis? — No → Write Reports

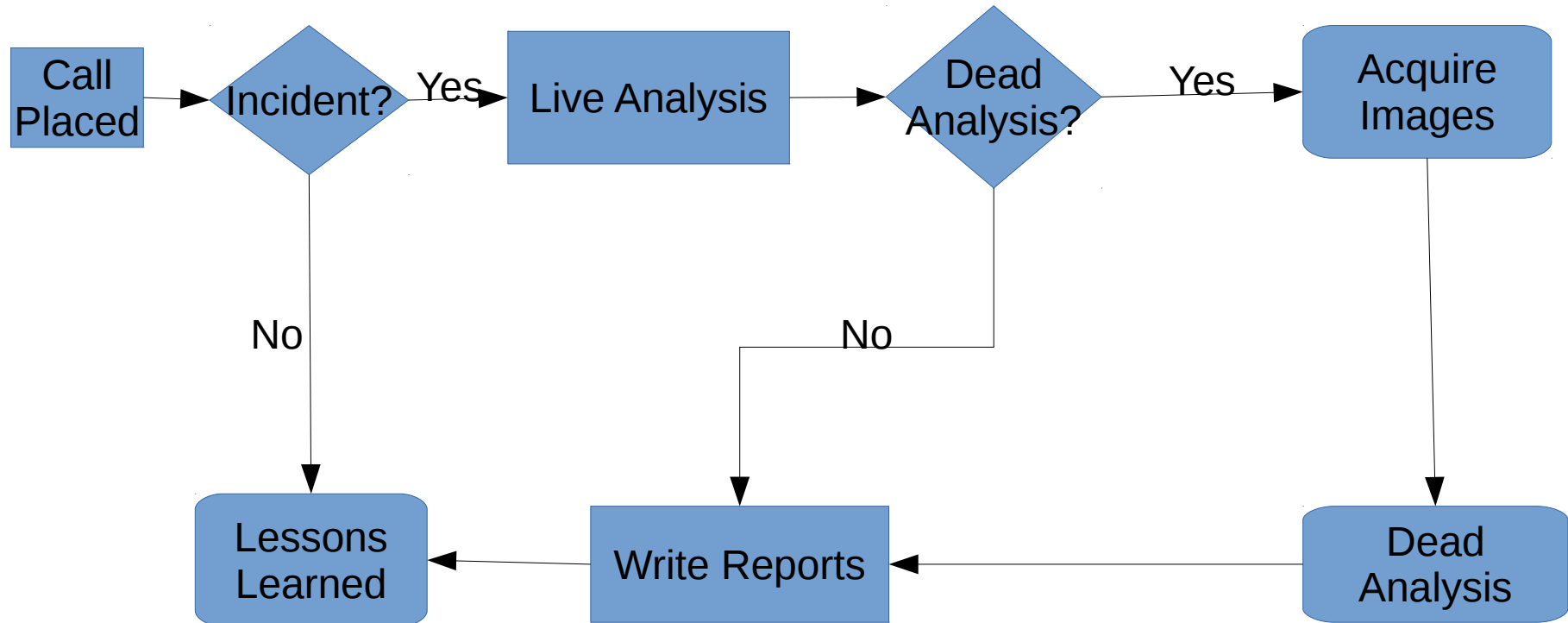Acquire Images → Dead Analysis → Write Reports → Lessons Learned

Image File Formats

- Raw

- Proprietary with embedded metadata

- Proprietary with metadata in separate file

- Raw with hashes stored in a separate file

Creating an Image

- Raw: dd if=<subject device> of=<image file> bs=512

- Raw with hashes along the way: dcfldd if=<subject device> of=<image file> bs=512 hash=<algorithm> hash window=<chunk size> hashlog=<hash file>

Write Blocking

- Hardware write blockers
  - Commercial blockers for SATA only $350+
  - USB write blocker described in USB class
    - Cheap at about $25
    - Slow due to limits of microcontroller that is full-speed (12 Mbps) only
- Software write blocking
  - Use udev rules as described in USB forensics course
  - Boot live forensics Linux on subject computer
  - Boot live forensics Linux on forensics workstation

Making the Image