Lessons Learned while providing SiLK Training

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About me

• Worked in a CSIRT as: Incident Analysis and Coordination, Penetration Testing, Antivirus support. Worked with SiLK on and off since 2002.

• Most of what I’m saying is first hand, but we’ve had other trainers too.
Some variables and some constants

- Topics stayed largely the same over this discussion. Trained analysts on SiLK along with a few other tools (visualization, scan database, iSiLK) built using SiLK
- Started with real data and context, migrated towards obfuscated data
- Used different facilities and gear at different times
- Only recently started pre-testing for Unix proficiency
- No pre-testing for TCP/IP familiarity
Facilities

- Our customers are in roughly six different time zones

- Our own facility:
  - Having a CAC doesn’t mean having a certificate on that CAC.
  - Live training via teleconferencing difficult to do and almost impossible to do effectively with in person students at the same time

- Customer provided facilities:
  - Insist on testing full connection including usernames and passwords (at least one!) before you jump on that plane. Then quietly check against your data server’s logs.
  - Just because it works on one workstation doesn’t mean all the workstations on a network have the same browser configuration.
  - Just because a commercial version of SSH client is installed doesn’t mean the customer’s firewall allows tcp/22 outbound to the training server.
  - If you’ve never seen pictures or been before, and the customer says there’s an overhead projector, bring a pointer in case it’s beyond arms reach.
The tools

• SiLK installed easily on Linux environment. iSiLK installed easily under Windows without System Admin privileges (your mileage may vary).

• At least one Unix (Ubuntu) environment where iSiLK client doesn’t work. Open source software doesn’t necessarily mean it’ll work on an Open Source Operating System.

• rwrrandomize could potentially be replaced with a process vice a simple tool, as others have suggested.
Training Data

• If you can train on real data, with context, that’s the most compelling to a student.

• If you obfuscate your data, save the map! We later added asset data and had to grab new netflow data to have them similarly obfuscated.

• Keep the general types of use cases, even if you change the names, locations, dates, etc. Otherwise, loses interest.

• For obfuscated data, we used a couple of /16s plus added some additional flow data covering a Denial of Service attack, and changed the IPs and times.
Students & Training Material

• A fair number of students had forgotten some important details about TCP like the 3 way handshake.
• A fair number had minimal experience with Unix, a few were software developers.
• Highlights found in SEI (or other existing or easily created material) are sufficient for the above cases.
I’ve been trained, now what?

- Users may not know what to do with flow data other than scope and impact based on IDS alerts.
  - Know the users overall mission and business processes
    - Integrate with this where it makes sense
    - Advocate rescoping where it makes sense
    - You may have to do a lot of the reworking
- Users may not have the skills to build out processes.
  - You may find it useful to write scripts, provide mappings, etc yourself.
  - Someone has to maintain these