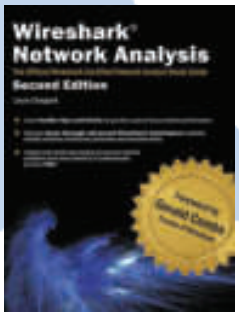
SHARKFEST '12

Wireshark Developer and User Conference

Create a Security Profile Using New Wireshark Features

Laura Chappell
Founder, Wireshark University
Founder, Chappell University

Just Released!



1

SHARKFEST '12

What is a "Security Profile"?

A customized Wireshark configuration built to **identify unusual traffic.**

RECONS

probandoprobandoprobando

.exe/zip/jar attachments

Bot DNS query response styles

MZ...This program cannot be run in DOS mode

Unusual HTTP response codes

Browsing to China/Russia

2

Security Profile Elements

- ✓Protocol preference settings
- ✓Coloring rules
- ✓Display filters
- ✓Filter expression buttons

3 SHARKFEST '12

Basic 4-Step Process

1. Create a new profile
2. Add your "suspect traffic" coloring rules (use a name/color convention)
3. Create Filter Expressions to display sets of traffic based on their group name
4. When you open trace files, click the Filter Expression to view the desired traffic

4 SHARKFEST '12

COLOR Coding is Key

- Coloring Rules – what color palette shall you use to identify…
  - Recons — WHITE on dark orange (#FF4F00)
  - Known breaches — WHITE on dark orange (#FF4F00)
  - Hits to suspect websites — WHITE on dark orange (#FF4F00)
  - Uploads/downloads of .exe files — WHITE on dark red
  - Errors "of concern" — BLACK on orange
  - Tools in use — BLACK on #FF4FFF
  - Just notes to yourself — WHITE on dark green

5 SHARKFEST '12

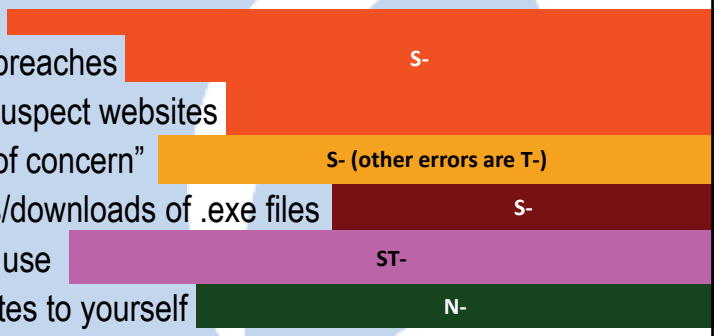
A Note to the Developers…

- Filter Expressions saved in a separate file (not in *preferences*) –easier to share/distribute without sending too much unnecessary stuff
- More color names known – possible to define color names in a table and pull from a drop down?
- Fix the custom column display problem (column for coloring rule name not applying properly – custom column problem?)

6 SHARKFEST '12

Proper Naming is a MUST

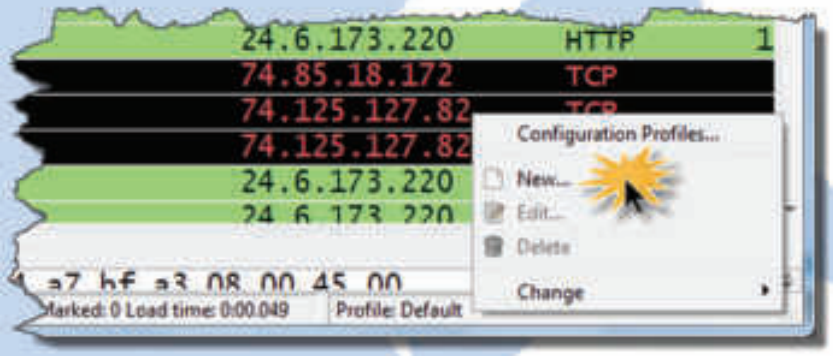
- Naming Rules – what preceding pattern will help filter out packets that match a certain coloring rule?
  - Recons
  - Known breaches
  - Hits to suspect websites
  - Errors "of concern"
  - Uploads/downloads of .exe files
  - Tools in use
  - Just notes to yourself



7 SHARKFEST '12

Let's Build a New Security Profile

- Select **Edit | Configuration Profile** or right-click on the Profile column on the Status Bar



8 SHARKFEST '12

Get Your Regex On!

- $ end of line
- ^ beginning of line
- (?i) case insensitive
- . any character (except newline \n)
- \ escape out special characters

Example:
frame matches "(?i)probando"

9 SHARKFEST '12

ASKTOOLBAR.DLL MALWARE

- alert tcp $HOME_NET any -> $EXTERNAL_NET $HTTP_PORTS (msg:"ET MALWARE ASKTOOLBAR.DLL Reporting"; flow:established,to_server; content:"**GET**"; nocase; http_method; content:"**/toolbarv/askBarCfg?**"; nocase; http_uri; content:"**v=**"; nocase; http_uri; content:"**e=**"; http_uri; nocase; reference:url,threatexpert.com/report.aspx?md5=3f6413475b1466964498c8450de4062f; classtype:trojan-activity; sid:2012000; rev:3;)

10 SHARKFEST '12

Let's Add Some Color -

- Illegal ICMP Echo Requests (tool detection) — ST-
- LOIC (by Anonymous) — ST-
- Questionable ICMP Types 13, 15, 17 — S-
- HTTP GET Requests for .exe or .zip files — N-
- Connecting to a .ru or .cn HTTP server — N-
- Duplicate IP Addresses Detected — S- (other errors are T-)

11 SHARKFEST '12

Finally - the Core Filter Expression Buttons!

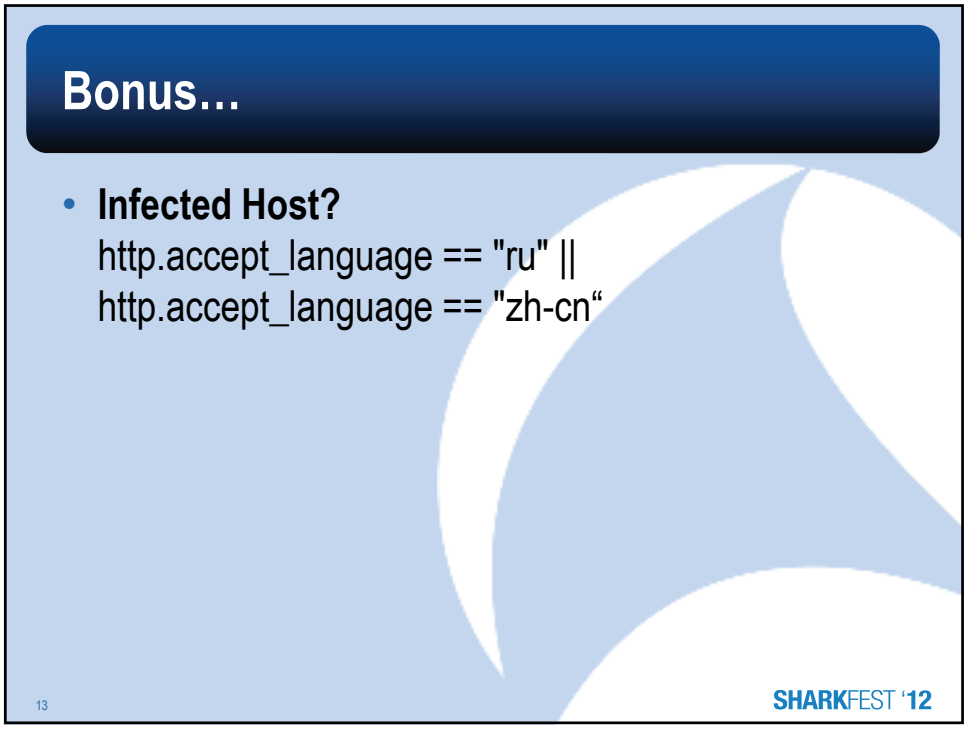
frame.coloring_rule.name matches "^S-"
All packets that match any **security** coloring rule names

frame.coloring_rule.name matches "^T-"
All packets that match any **troubleshooting** coloring rule names

frame.coloring_rule.name matches "^ST-"
All packets that match any **tool detection** coloring rule names

frame.coloring_rule.name matches "^N-"
All packets that match the **notes** coloring rule names

12 SHARKFEST '12


Bonus…
• Infected Host?
http.accept_language == "ru" ||
http.accept_language == "zh-cn“
13
SHARKFEST '12