#sf21veu

The Search For Network Truths

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The State Of Wireshark

Next Release

Next major release: 3.6

Some time soon-ish?

New In 3.6

Better documentation thanks to the Google Season of Docs

Better git dissector thanks to Outreachy

RTP player updates

macOS Apple Silicon installer (soon, we hope)

Statistics

> 1M Downloads / month …on the servers we manage

90-ish% Windows, 69% Win64 …mostly due to automatic updates

2650 protocols, 221k fields

> 1900 authors

3M lines of code. Or maybe 4.7?

Network Truths

“Revelation of the truth should be the undergirding of all meaningful work.”

— Kristin Dow

Ceci n'est pas une packet

```
0000  00 00 0c 36 00 19 00 c0 4f c7 eb c0 08 00 45 10   ...6....O.....E.
0010  00 3c 0a e2 40 00 40 06 a1 67 cf b7 8e 57 ce 41   .<..@.@..g...W.A
0020  62 12 00 16 03 fe 48 d4 75 5a 5e 43 78 9a 50 18   b.....H.uZ^Cx.P.
0030  7c 00 79 fe 00 00 00 00 00 09 ba 69 ee 54 7a 91   |.y........i.Tz.
0040  80 83 e6 4a                                       ...J
```

A Minimal Network Analyzer


```
packets := open_interface(interface_name);
for each packet in packets {
        print (timestamp);
        print (hex_dump(packet));
}
```

Hex Dumps Aren’t Enough

Details: Protocol analyzers, IDSes

Summary: Flow monitors & analyzers

Interaction: Port scanners & replay

Helping People Avoid Hex Dumps

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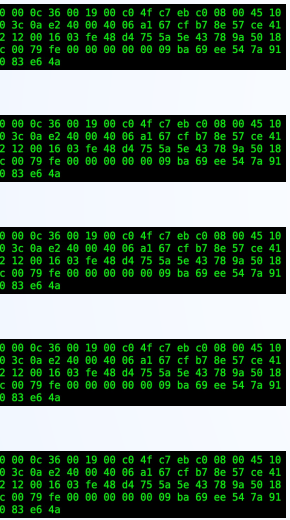
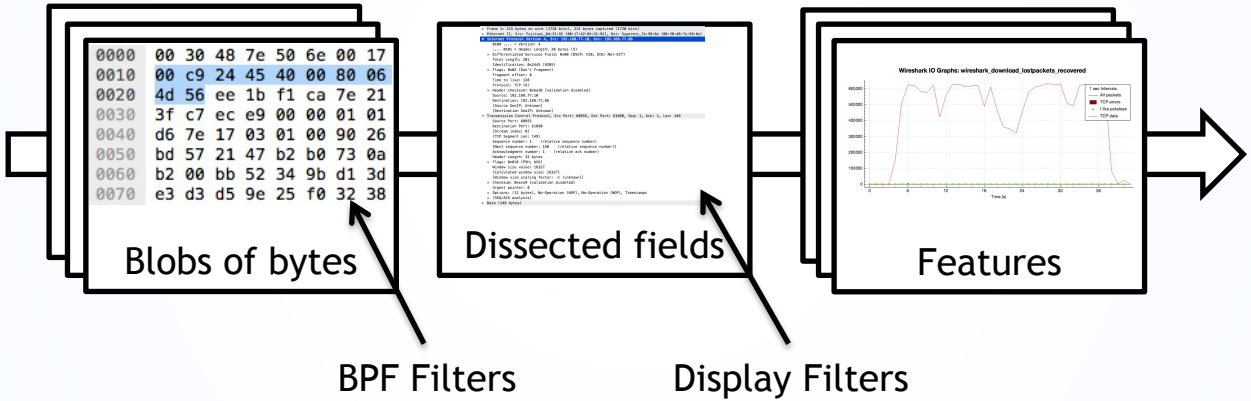


Packets



You, The All-Important User

It’s More Than Hex Dumps

~~Goal: Help people run away from hex dumps~~

Goal: To help as many people as possible to understand their networks as much as possible

Getting To The Goal

Provide lots of details about lots of protocols

Provide context and identify relationships

Run on lots of systems

Integrate with other tools

How Did We Get Here?

Open source helps

So does having a great community

Removing Friction

Make sure Wireshark is easy to obtain

Make sure developers have tools they need

Make sure community can operate

Wireshark Isn’t Enough

We aren’t

- An IDS
- A port scanner
- A long-term monitoring tool
- A high-volume monitoring tool

…and that’s fine!

Wireshark *Still* Isn't Enough

We show as much detail as we can

It's up to you to interpret that

That's where SharkFest comes in

Getting The Most Out Of SharkFest

If this were a physical event you could:

Attend talks
Talk to each other & to the sponsors
Stop by the Developer Den & other rooms
Do the challenges

Since this is a virtual event, you'll have to settle for the following:

Attend talks
Talk to each other & to the sponsors
Stop by the Developer Den & other rooms
Do the challenges

Truth And Informed Decisions

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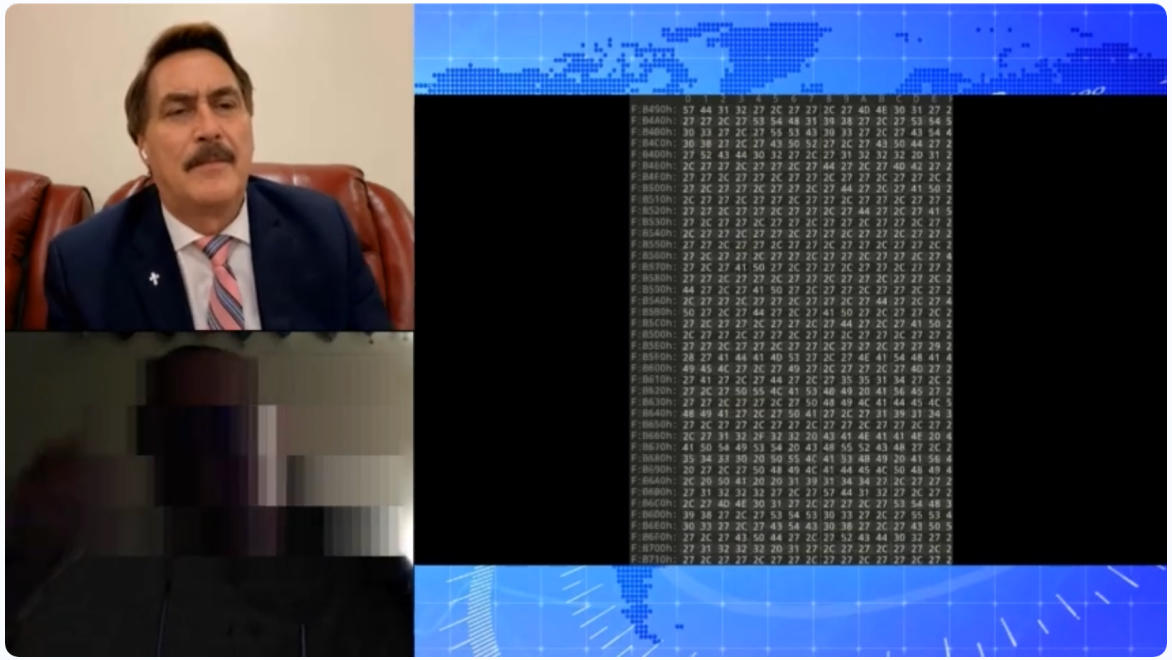

Hollywood Hacking

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Hollywood Hacking is when some sort of convoluted metaphor is used not only to describe hacking, but actually to put it into practice. Characters will come up with rubbish like, "Extinguish the firewall!" and "I'll use the Millennium Bug to launch an Overclocking Attack on the whole Internet!" - even hacking light switches and electric razors, which is even sillier if said electric razor is unplugged. The intent is to employ a form of Artistic License or hand waving which takes advantage of presumed technophobia among the audience. You can also expect this trope to annoy those within the audience whose occupation involves computers or the Internet.

https://tvtropes.org/pmwiki/pmwiki.php/Main/HollywoodHacking

Hollywood vs Reality

Brim	83561
Kismet	1028238
Nmap	781262
ntopng	883664
Scapy	169971
Snort	483634
tcpdump	121150
Wireshark	5424249
Zeek	185854

LoC of main repository, measured using tokei

Joy In Truth

What You Do Is Important

“Software is eating the world.”

— Marc Andreesen

“The network is always up, fast, and secure, right?”

— Everyone writing that software

Thank You

Questions?

Bonus Slides

Correcting Ourselves

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```
commit 4628dc0118
Author: Gerald Combs <gerald@wireshark.org>
Date:   Wed Apr 16 13:23:04 2014 -0700

    Disable transport name resolution by default.

    Modern hosts typically open many more TCP and UDP connections than in
    years past.  For an example opening a popular news site in a web browser
    can easily trigger dozens of separate connections. At the same time our
    services file has accumulated a lot of cruft over time. As a result
    transport name resolution is a bunch of lies.
```

Keep Practicing

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