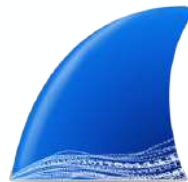


# **Ecosystem Expansion**

**Gerald Combs**  
**Core Developers**

# What Do All Of These Have In Common?



If your favorite isn't here, I ran out of space for logos. Sorry.

# What Do All Of These Have In Common?



TCPDUMP

ntop



**LIBPCAP**

WinPcap

Npcap

# Libpcap + .pcap + .pcapng



Lets application developers focus on features

Capture anywhere (with WinPcap/Npcap)

Common file format is a productivity multiplier

# Why Packets?



They're *truthful, accessible, and reliable.*

# Zeitgeisty



# Zeitgeistier

The screenshot shows a Walmart product page for a black t-shirt. The browser address bar displays the URL: [walmart.com/ip/Pcap-Or-It-Didn-T-Happen-Packet-Capture-T-Shirt/5029101039](https://www.walmart.com/ip/Pcap-Or-It-Didn-T-Happen-Packet-Capture-T-Shirt/5029101039). The page header includes the Walmart logo, a search bar with the text "Search everything at Walmart. online and in store", and navigation links for "Reorder My Items", "Sign In Account", and a shopping cart icon showing "\$0.00". The breadcrumb trail reads: "Clothing / Womens Clothing / Womens Tops / Tshirts for Women / Tshirts for Women". The product image shows a black t-shirt with the text "PCAP" in large white letters, a graphic of a hand holding a packet capture tool, and "OR IT DIDN'T HAPPEN" below. The price is listed as "\$9.99" with a note "Price when purchased online". A blue "Add to cart" button is visible. The product title is "Pcap Or It Didn't Happen Packet Capture T-Shirt". The color is "Black" and the clothing size is "3XL".

How do you want your items?  
Sacramento, 95829 • Sacramento Su...

Search everything at Walmart. online and in store

Reorder My Items Sign In Account \$0.00

Departments Services Deals Grocery & Essentials Father's Day Graduation Home Fashion Electronics Patio & Garden Health & Wellness

Clothing / Womens Clothing / Womens Tops / Tshirts for Women / Tshirts for Women

budens  
Pcap Or It Didn't Happen Packet Capture T-Shirt

Free shipping Free 30-day returns

\$9.99  
Price when purchased online

Add to cart

Color: Black

Clothing Size: 3XL Size guide

<https://www.walmart.com/ip/Pcap-Or-It-Didn-T-Happen-Packet-Capture-T-Shirt/5029101039>

# This Works Great!



Having a common library and file formats works really well.

What other sources of truth are available?



# This Works Great!



Having a common library and file formats works really well.

What other sources of truth are available?

*What about system calls and logs?*

# Story Time

TCPDUMP  
LIBPCAP

1988

Something in  
the water?

WinPeap



1998

1999

CACE  
TECHNOLOGIES



2005

2006



2008

riverbed

2010

sysdig



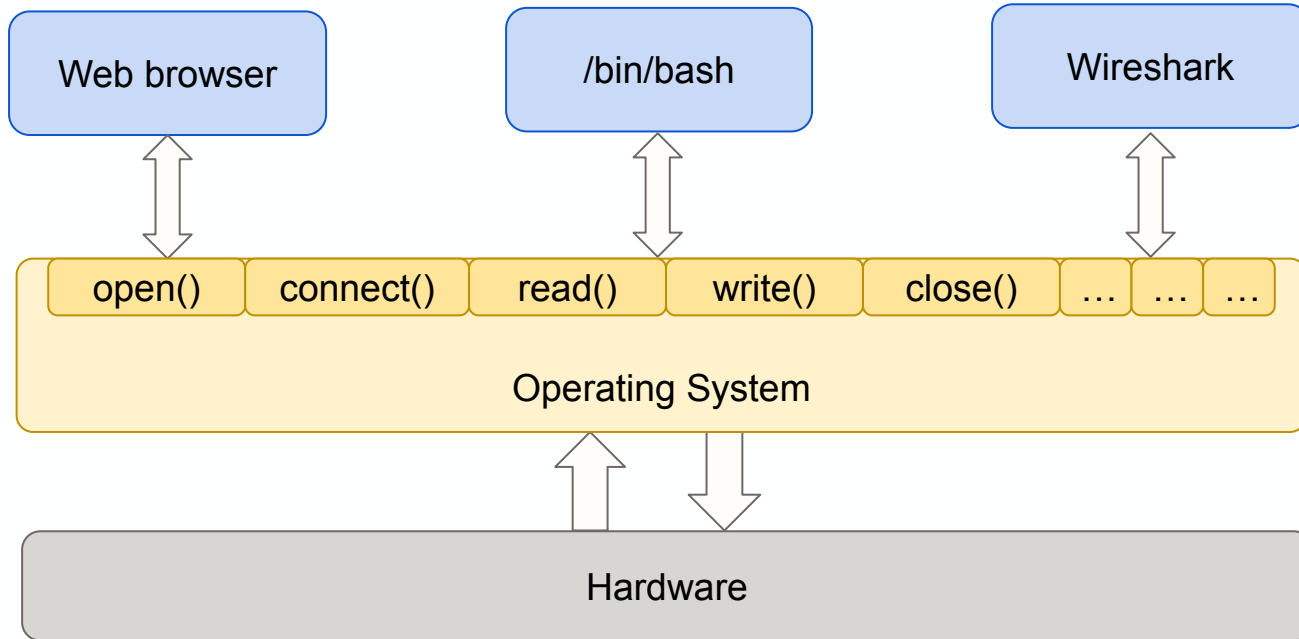
2014

2015

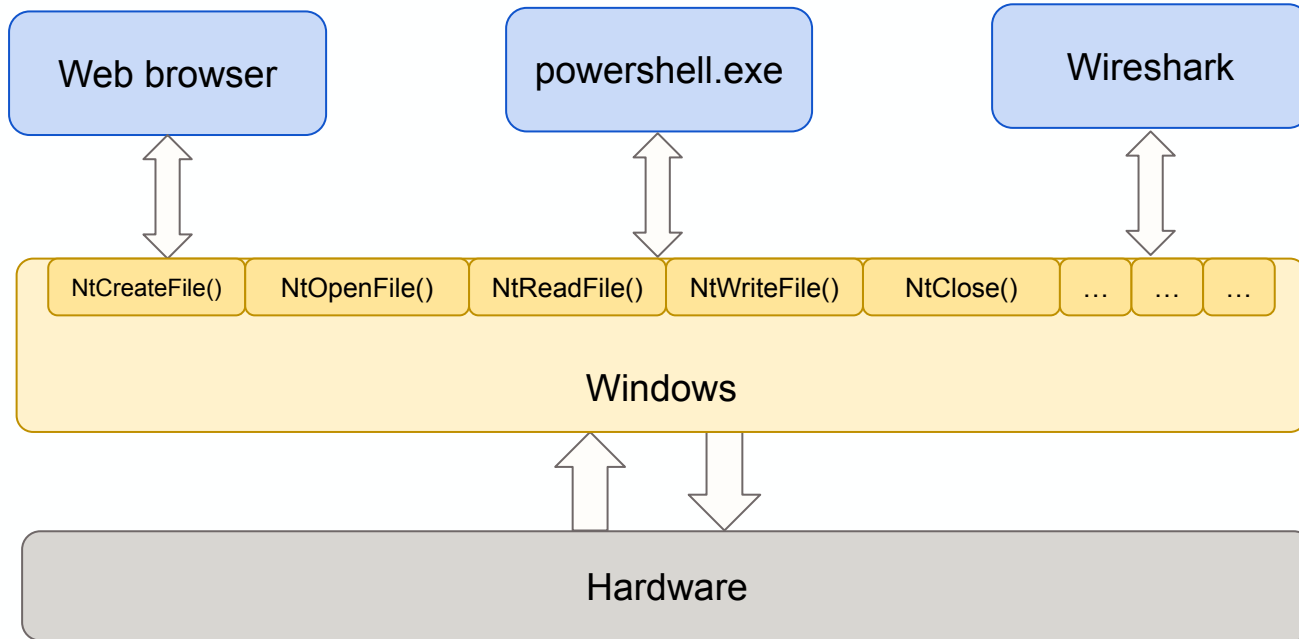
Falco

2016

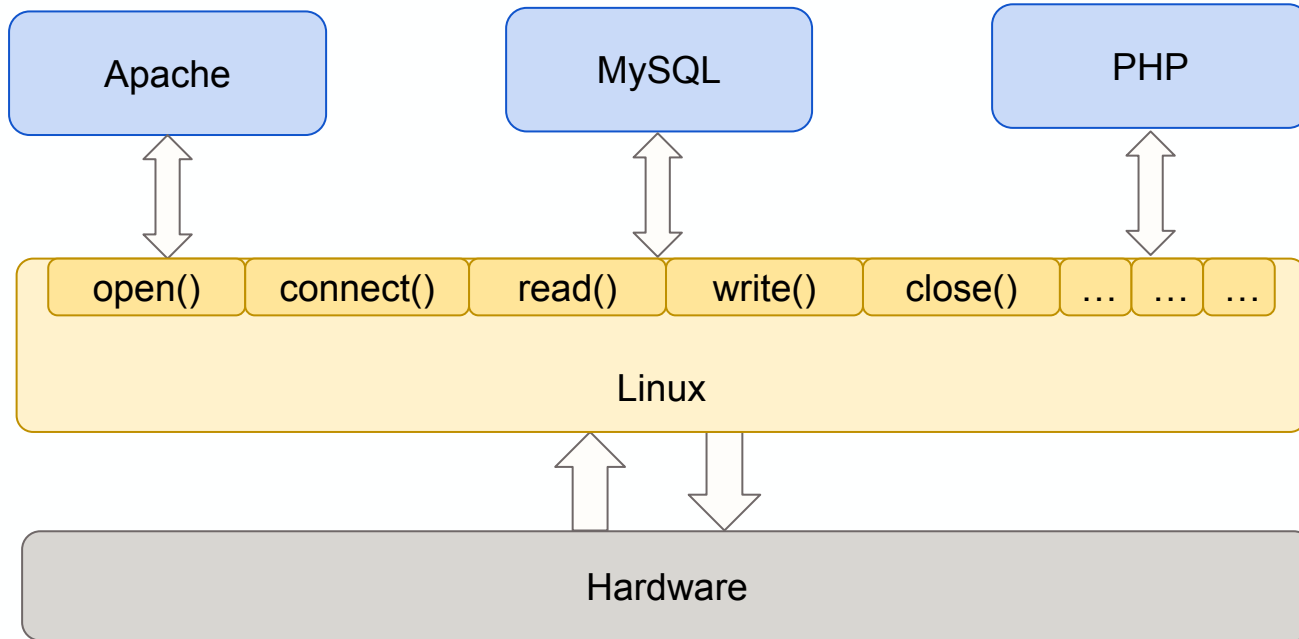
# System Calls



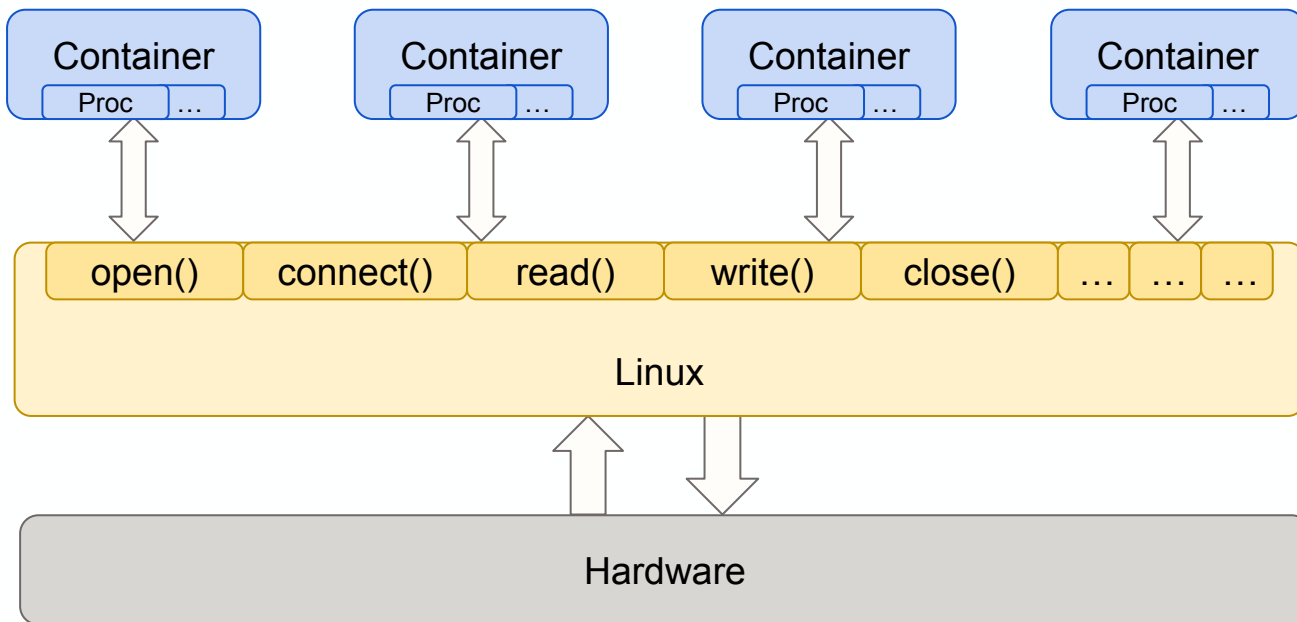
# System Calls



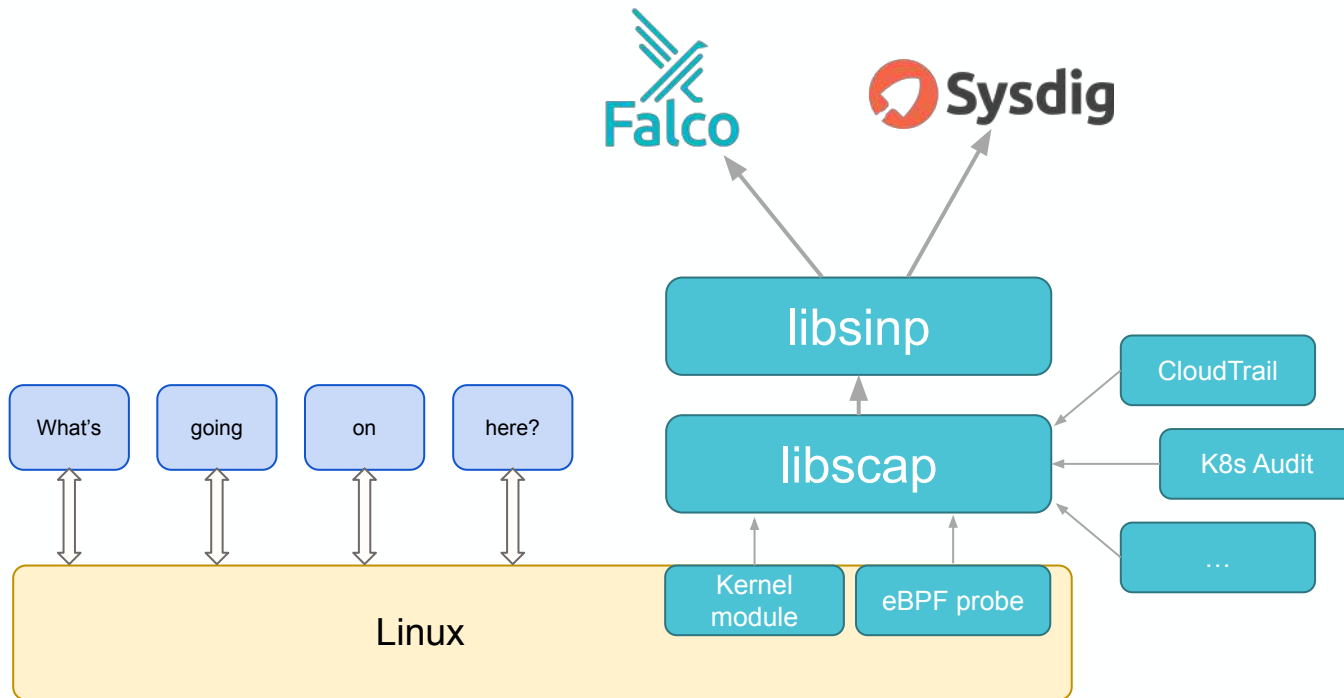
# Ye Olde LAMP Stack



# Present Day

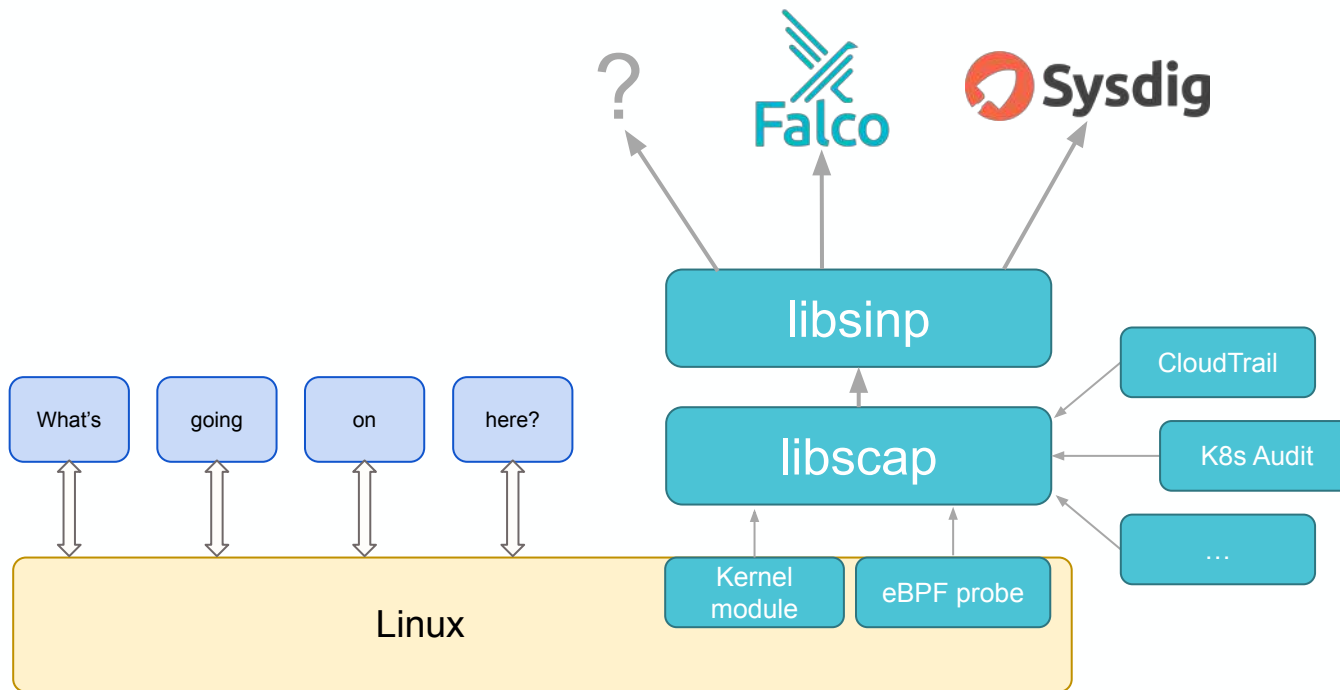


# libscap + libsinsp



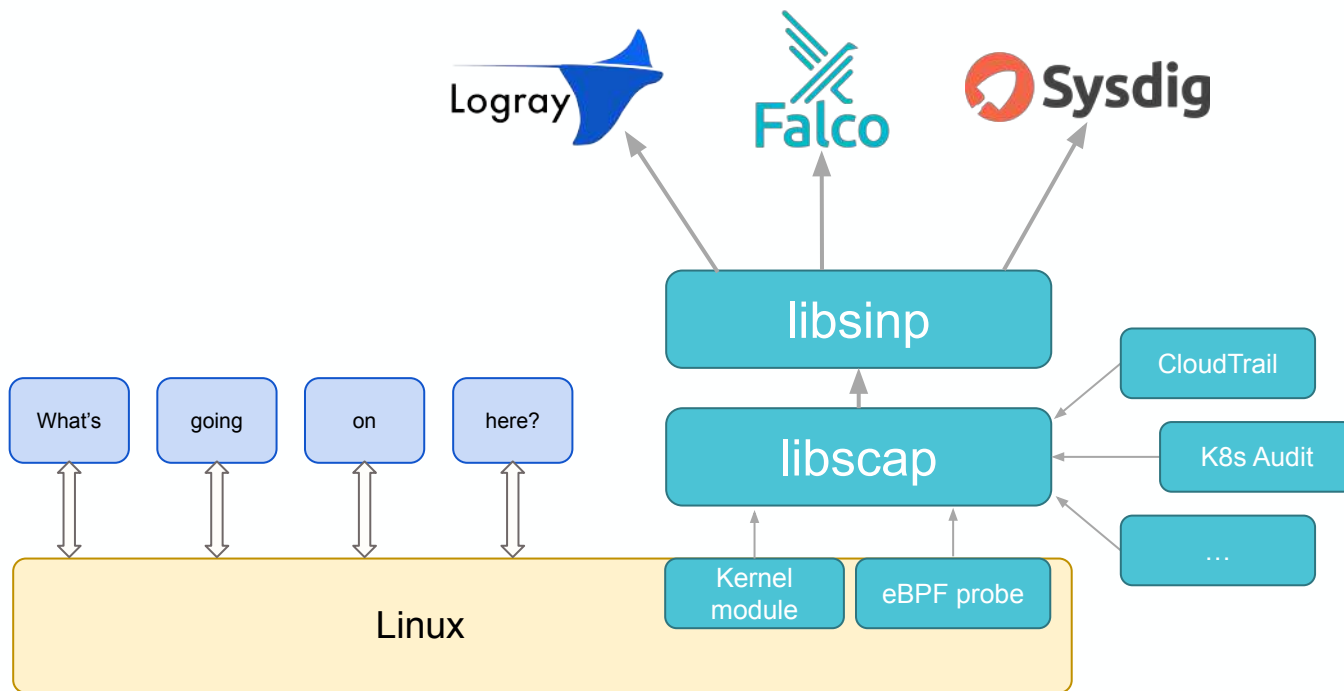
<https://github.com/falcosecurity/libscap>

# libscap + libsinsp





# libscap + libsinsp



# Demo Time<sup>1</sup>

1. May contain traces of danger and stupidity

# Expectation Management



This is in addition to, and not instead of, Wireshark

Rough in the sense that there's still lots to fill in and smooth out

The slate is intentionally blank

# When?

Officially? Soon.  
Technically? Now.

# The State of Wireshark



Next major release this summer?

Updates:

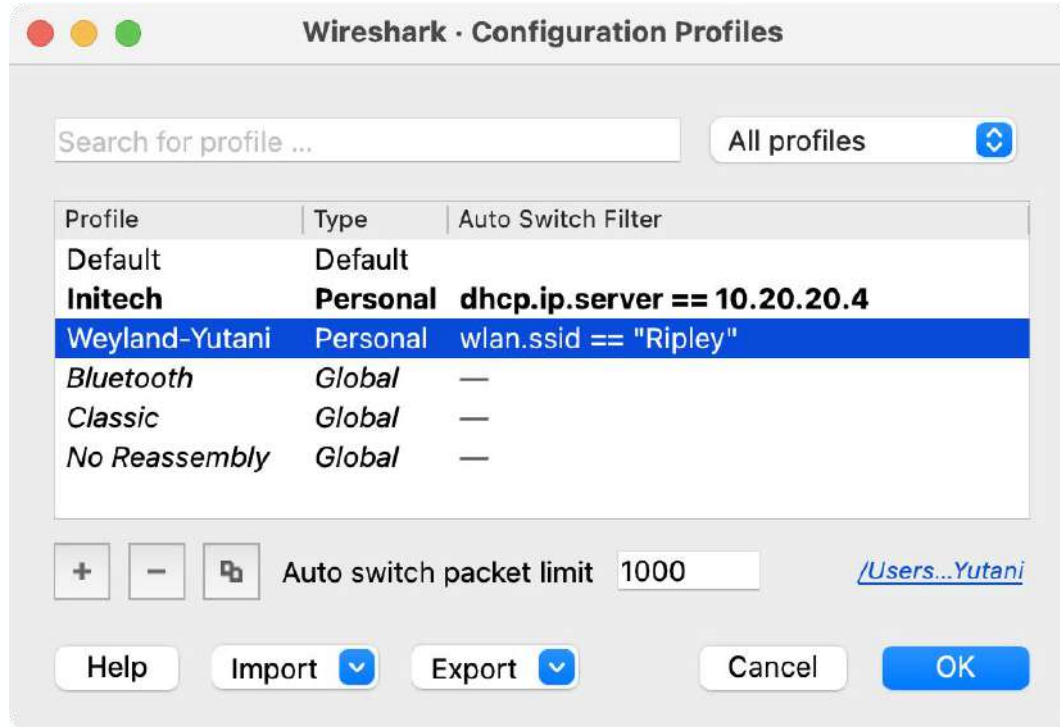
Automatic profile switching

Lua 5.3 / 5.4

Display filter, I/O graph, Sequence Diagram, TCP Stream Graph

More custom column support

# Automatic Profile Switching



# Vital Statistics



~ 1.5M Downloads / month ...on the servers we manage

~83% Windows, ~16% macOS ...again, on the servers we manage

3000 protocols, 250k fields

> 2300 authors

> 4100 Discord users

3.4M lines of code. Or maybe 6.2?

# The State of the Foundation



Steering committee is now official

Platinum members: Endace, LiveAction

Silver members: Veeam, Npcap



# How You Can Help



*Good:* Donate at [wiresharkfoundation.org](https://www.wiresharkfoundation.org)

*Better:* Set up a recurring donation

*Best:* Get your employer to match donations or become a member

# Developer Time

# Thank You



# Links



Automated builds

<https://www.wireshark.org/download/automated>

event-extras.lua

<https://gist.github.com/geraldcombs/d7d541af18890750f1a4197e406e7cf9>

Linux system calls

<https://filippo.io/linux-syscall-table/>

# Bonus Slides

