




SHARKFEST '14
WIRESHARK DEVELOPER AND USER CONFERENCE
JUNE 16-20 2014 · DOMINICAN UNIVERSITY

Understanding the TCP Expert

Jasper Bongertz, Senior Consultant
Airbus Defence & Space CyberSecurity

Topics

- Motivation
 - The TCP Expert module
 - TCP Expert messages
- 
- A decorative graphic on the right side of the slide, consisting of several large, white, curved shapes that resemble stylized waves or abstract forms, set against a light blue background.

Motivation

- Questions on <http://ask.wireshark.org> like:
 - „why does my server say the window is full?“
- The TCP expert is not always right:
 - Classic „segment lost, out-of-order, retransmission“ messages in a row

The TCP Expert Module

- The TCP expert is a software module that verifies TCP packets
 - Tracked per TCP connection
- Packets that are „bad“ or „in the wrong“ place are marked
 - Packet Loss, Out-of-order,...
- Also, some packets with important characteristics will be marked
 - Window Full, Window Update,...

TCP Expert messages

- We will look at these messages:
 - TCP Window
 - „Window Full“
 - „Window Update“
 - „Zero Window“, „Zero Window Probe“, „Zero Window Probe ACK“
 - Packet Loss:
 - „Previous Segment not captured“
 - „Out-of-Order“
 - „Retransmission“ (Normal, Fast, Spurious)



SHARKFEST '14

WIRESHARK DEVELOPER AND USER CONFERENCE

JUNE 16-20 2014 · DOMINICAN UNIVERSITY

Live Demos



SHARKFEST '14

WIRESHARK DEVELOPER AND USER CONFERENCE
JUNE 16-20 2014 · DOMINICAN UNIVERSITY

Thanks! Questions?

eMail: jasper@packet-foo.com
Blog: blog.packet-foo.com
Twitter: [@packetjay](https://twitter.com/packetjay)