

How to identify a burst in a capture ?

- 2018-02-21 - Wireshark

Bursts being sometimes source of problems (mainly in video projects), their identification is important nevertheless the SNMP tools can't help because they just give an average on several seconds while the burst usually lengths few ms.

The best way to identify them (using free tool) is to analyse a capture of the stream with Wireshark.

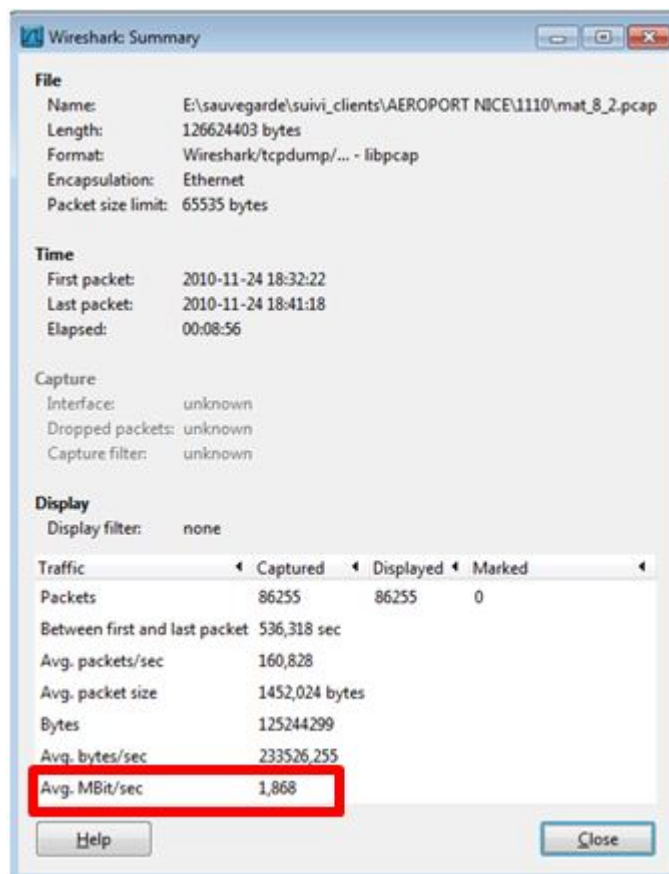
First of all, in the main Window you may find some hints such as "fragmented IP packets" which are usually big size IP packets fragmented to be sent on Ethernet. Of course the delay between the fragments is extremely short. Adding the "Delta time between packets" in you main view will help you to see that.

No. .	Time	Date	Source	Destination	Protocol	Info	Delta	Length
85180	529.518496	2010-11-24 18:41:11.576531	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000096	1514
85181	529.518524	2010-11-24 18:41:11.576559	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000028	60
85182	529.597908	2010-11-24 18:41:11.655943	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.079384	1514
85183	529.597956	2010-11-24 18:41:11.655991	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000048	1514
85184	529.598082	2010-11-24 18:41:11.656117	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000126	1514
85185	529.598191	2010-11-24 18:41:11.656226	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000109	1514
85186	529.598330	2010-11-24 18:41:11.656365	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000139	1514
85187	529.598438	2010-11-24 18:41:11.656473	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000108	1514
85188	529.598546	2010-11-24 18:41:11.656581	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000108	1514
85189	529.598824	2010-11-24 18:41:11.656859	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000278	1514
85190	529.598854	2010-11-24 18:41:11.656889	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000036	1514
85191	529.598909	2010-11-24 18:41:11.656944	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000055	1514
85192	529.599048	2010-11-24 18:41:11.657083	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000139	1514
85193	529.599153	2010-11-24 18:41:11.657188	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000105	1514
85194	529.599293	2010-11-24 18:41:11.657328	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000140	1514
85195	529.599392	2010-11-24 18:41:11.657427	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000099	1514
85196	529.599546	2010-11-24 18:41:11.657581	10.45.32.180	10.45.32.67	IP	Fragmented IP protocol	0.000154	1514
85197	529.599578	2010-11-24 18:41:11.657613	10.45.32.180	10.45.32.67	UDP	Source port: 162 Destination port: 162	0.000032	870

Fragmented IP packet

Very short delta time

Nevertheless the summary of your capture may show a very low load average :



Then go in ""Statistics"", ""IO Graph"", and in the new Window enter the following settings :

X Axis :

Tick interval : 0,001 sec

Y Axis

Units : Bits / Tick

Scale : 100000 (for a capture done on a Fast Ethernet Link)

1000000 (for a capture done on a Gigabit link)

Then the network load will be displayed in precision by the graph knowing the the scale correspond to a range from 0 % to 100 % of the link capacity.

In our example. in spite of a average load less than 2 Mb/s (usual for video streams) , the bursts reach 100 Mb/s, the max link capacity.

