

Instructions for capturing Wireshark data for troubleshooting EtherNet/IP and BACnet MSTP

Overview

Wireshark® is a network protocol analyzer that lets you capture and interactively browse the traffic running on a computer network. Wireshark is a free software that has a rich and powerful feature set and runs on most computing platforms including Windows®, macOS, Linux, and UNIX®.

Steps for capturing Wireshark data for EtherNet/IP

Step 1: Download wireshark from the link below:

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

Depending on the laptop configuration of OS, choose the suitable platform and version shown in the screenshot below.

Download Wireshark

The current stable release of Wireshark is 3.4.2. It supersedes all previous releases.



Step 2: Connect the EtherNet/IP PLC to one of the switch ports, for example, Port P2.

Step 3: From the switch user interface, configure one port, in this case P1, for mirroring which will send all data coming to port P2. Port P2 is the source and Port P1 is the destination for mirroring. For more information on mirroring, please review the port mirroring procedure for the Hirschmann™ switch, which is the switch in use.

Step 4: Connect the drives on the remaining ports, which can be one or more.

Step 5: Configure the PLC to talk to the drives connected to these switch ports, for instance P3, P4, and so on.



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Step 6: Connect the laptop that has Wireshark installed and running to Port P1, on which port mirroring is activated.

Step 7: Now you will be able to log all the data that Port P2 sees from the connected PLC.

The table below clarifies the description for the ports mentioned in the steps above.

P1	P2	P3	P4	P5	P6	P7	P8
Port mirroring is activated from P2	Connected to PLC	Connected to drive	Connected to drive	Connected to drive	Connected to drive	Connected to drive	Connected to drive

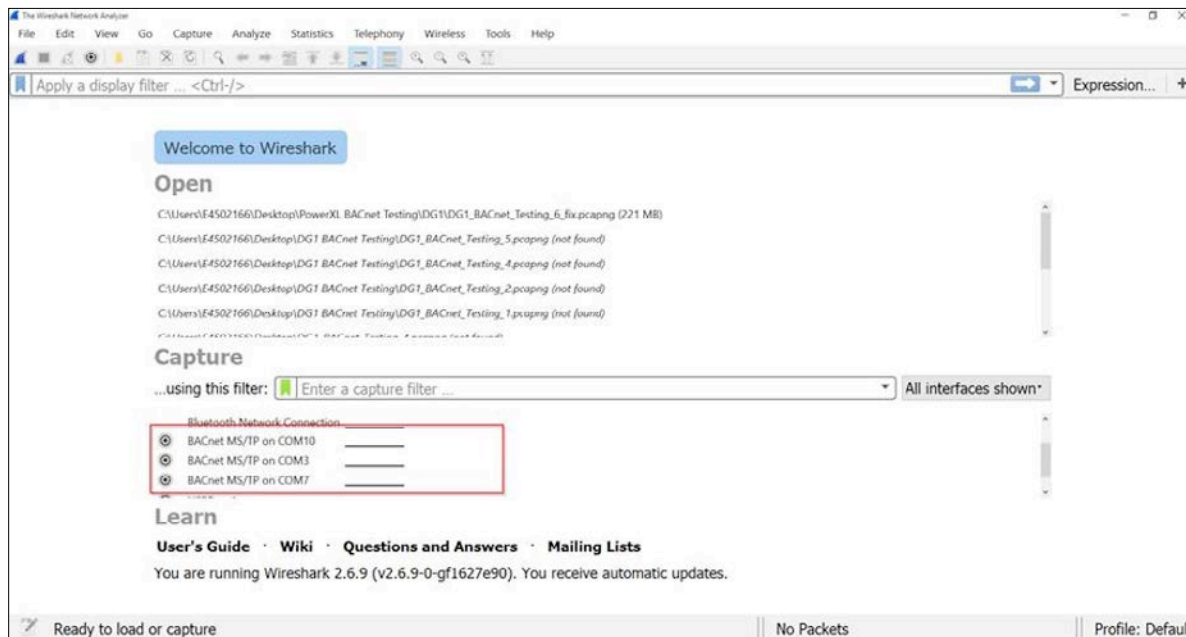
Steps for capturing Wireshark data for BACnet MSTP

Step 1: Install the mstpcap.exe. Details are available from the link below:

<https://bravocontrols.com/troubleshooting-bacnet-mstp-traffic-wireshark>

If mstpcap.exe is not available, please contact Eaton.

Step 2: Open Wireshark. You will notice that it now recognizes the assigned com ports, which are shown in the screenshot below.



Step 3: Click on the settings icon beside the com port you want to monitor BACnet MSTP on and set the appropriate baud rate. Note that it has to be a separate com port from the one you are using for Yabe.



Step 4: Click Start. The process is complete.

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