

How to capture network communication using Wireshark (Network Protocol Analyzer)

Introduction

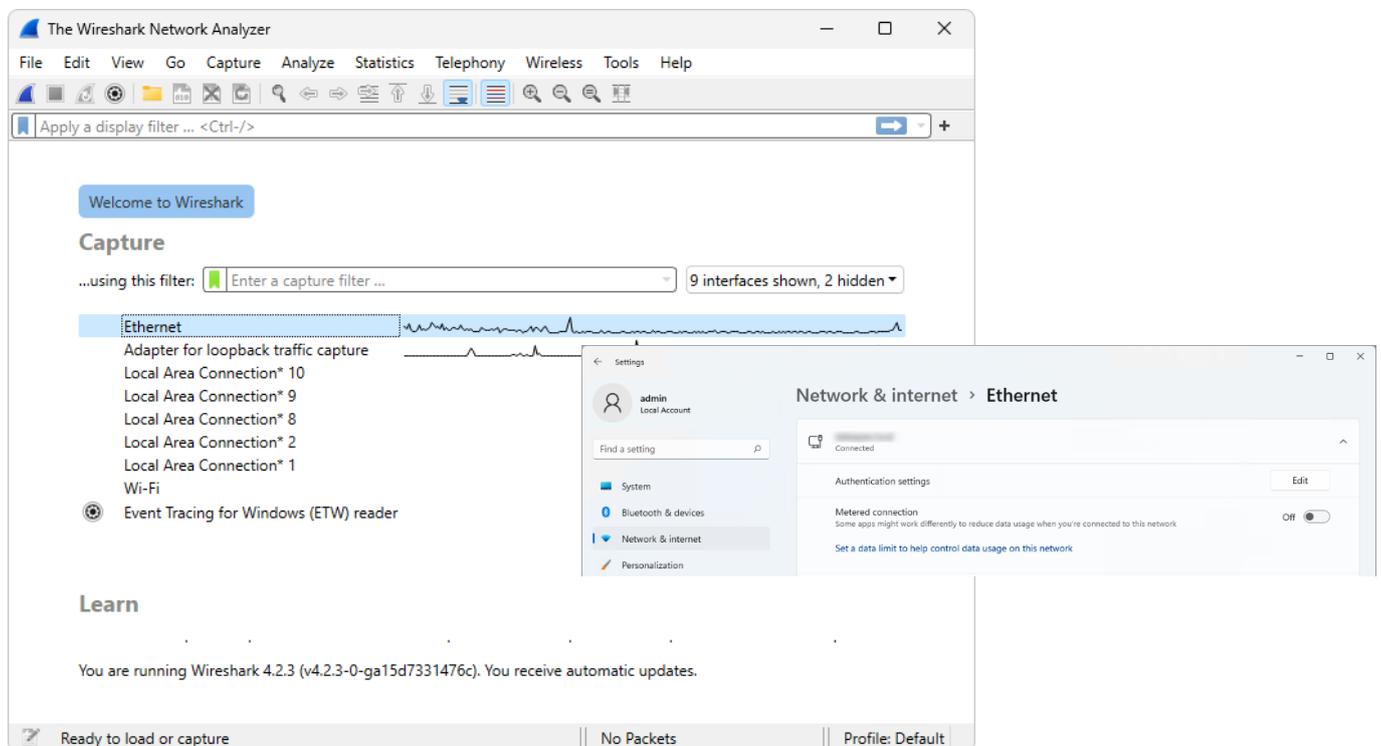
In case there is a demand for inspection of network communication between the PC and the device, it is possible to record this communication using the Wireshark software. Wireshark is capable of capturing various communication traffic running on a computer network, no matter if communication is performed via cable or wireless.

Procedure of Wireshark installation and use

1. Download the Wireshark software installer from the [Wireshark Download section](#). Choose the 32-bit or 64-bit installer version based on your Windows version.
2. Install Wireshark. During the installation procedure, keep the default parameters.
3. Start Wireshark. The initial window provides a list of available networks. It is necessary to select the respective network to which the device of interest is connected to.

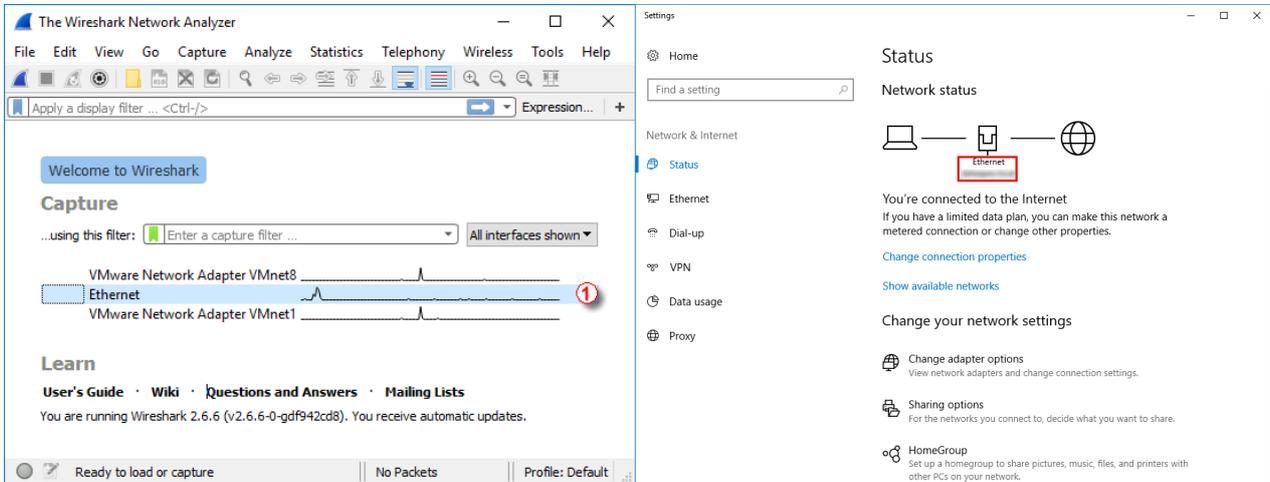
- Windows 11

If the device of interest is connected to the PC via Ethernet (LAN network), the name of the network can be found in Settings – Network & internet settings > Ethernet.



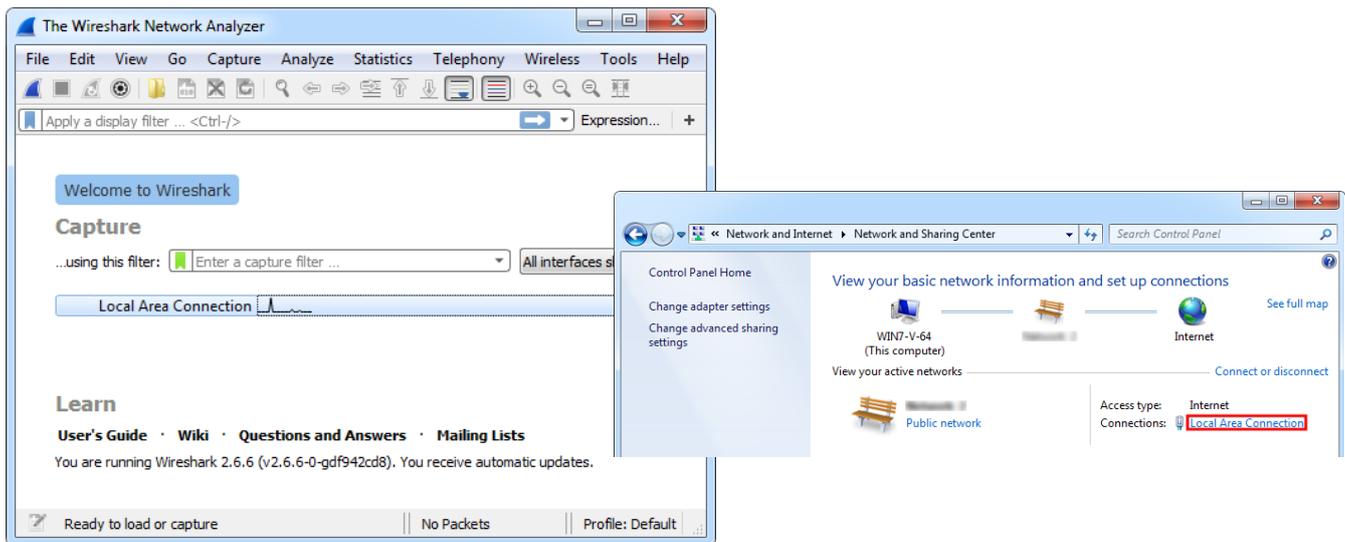
- Windows 10

If the device of interest is connected to the PC via Ethernet (LAN network), the name of the network can be found in Settings – Network status.

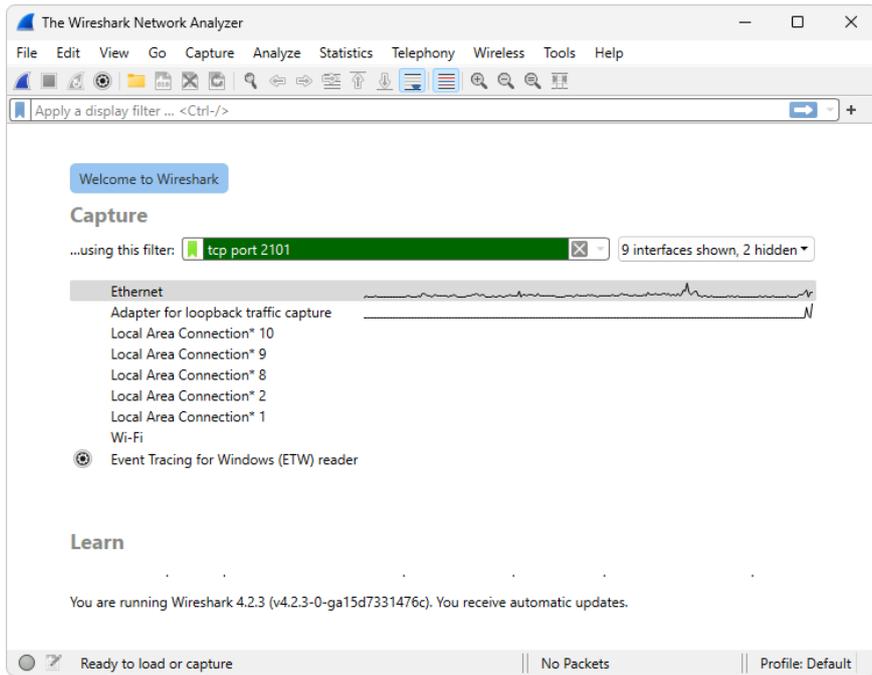


- Windows 7

If the device of interest is connected to the PC via Ethernet (LAN network), the name of the network can be found in Network and Internet – Network and Sharing Center.



4. In case the device is connected using a Wi-Fi network, it is necessary to select the correct Wi-Fi network in the list of networks.
5. Fill in the necessary information: in the *...using this filter:* item, specify which communication traffic should be recorded. In case of recording the communication traffic of a device connected via LAN, it is necessary to insert the **tcp port** command and the **port number**.



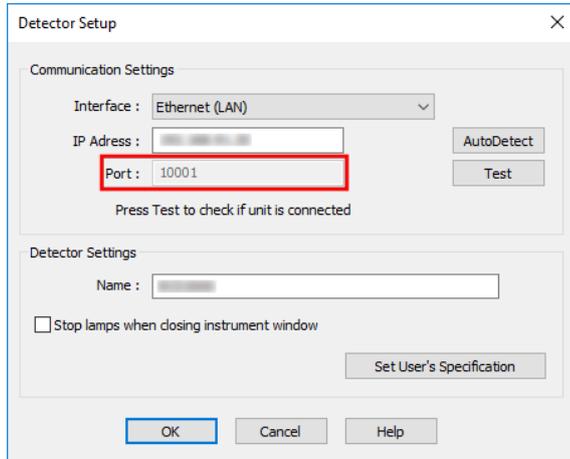
The **port number** value can typically be found in the device Setup dialog accessible under the 'Setup...' button in the System Configuration at the bottom of the dialog (see [online help for more info](#)).

The following contains some examples of port number values for various devices.

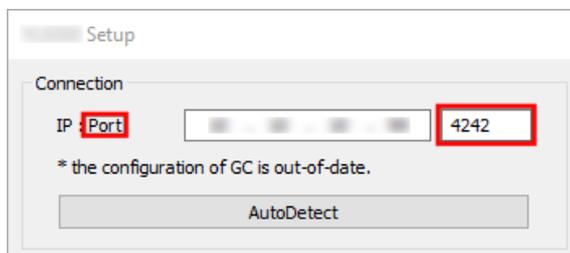
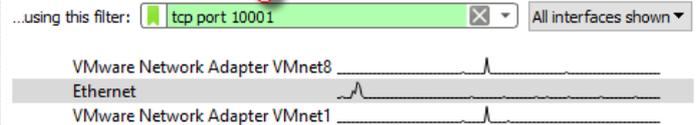
Device Setup in the Clarity System Configuration	Adapted Wireshark Settings

Device Setup in the Clarity System Configuration

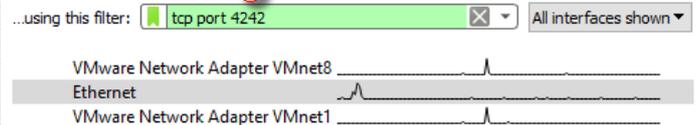
Adapted Wireshark Settings



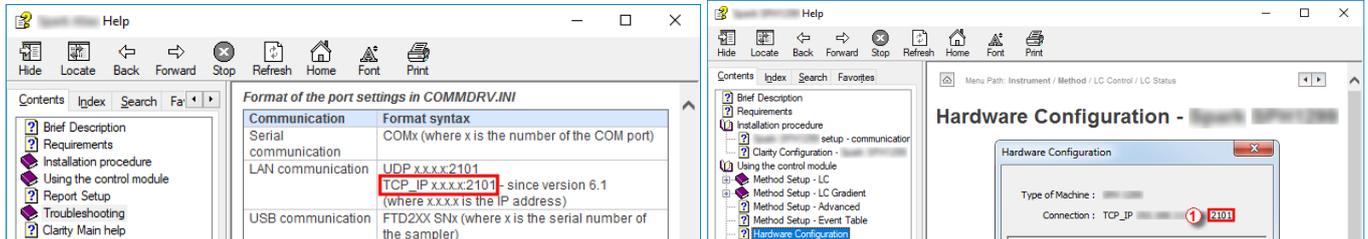
Capture



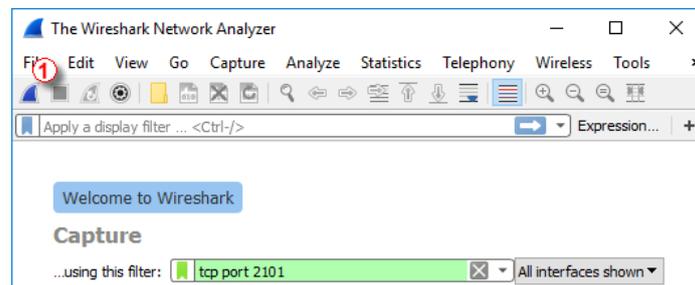
Capture



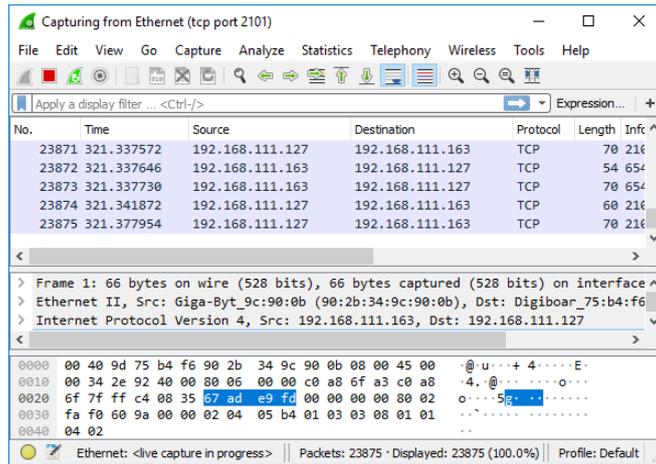
For other devices, this information about can be found in the Hardware Configuration or in the Help documentation.



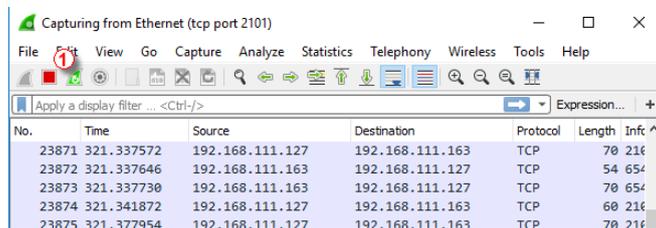
6. Then, it is necessary to start the recording of communication traffic using the icon of Wireshark (blue dorsal fin).



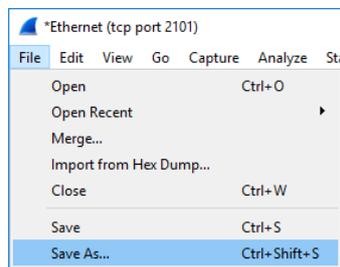
7. During capturing, the screen of Wireshark will be populated with communication. The trouble with the device should be repeated right now while the capturing is running.



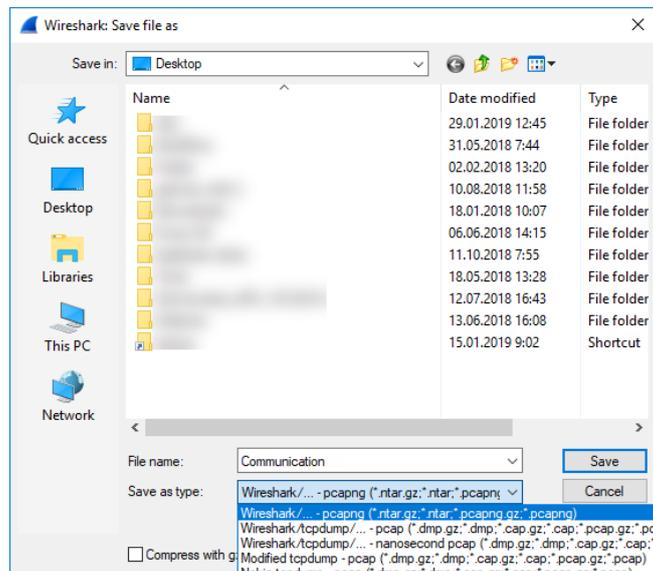
8. The capturing can be stopped using the red square icon.



9. Invoke the Save dialog using the 'Save As' command from the 'File' menu.



10. Name the communication traffic record and save it as the file type shown below.



11. Contact DataApex Support Team at support@dataapex.com and provide this captured communication.
12. DataApex Support Team can also provide guidance regarding types of communication and port numbers for respective devices upon request.