IoT Systems Lab # 3

Task 0:

- Install the following on one of the Raspberry Pis issued to you
  - NodeRED (https://nodered.org/)
  - Web server
  - FTP server
- Install the following on your laptop/ lab desktop
  - Wireshark
  - FTP client (FileZilla, WinSCP)
  - NodeRED

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Task 1:

- Create a simple HTML file and upload that to Raspberry Pi webserver directory.
- Using wireshark start capturing packets on your laptop and access the webserver running on the Raspberry Pi.
- Identify all the packets that were exchanged between the Raspberry Pi webserver and your laptop.
- Repeat the same steps for FTP, i.e., download a file from the Raspberry Pi FTP server using a FTP client running on your laptop and identify all relevant the packets.

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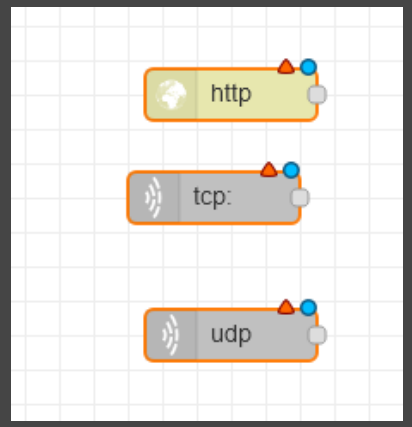
Task 2:

- Using http input and output nodes exchange messages between a Raspberry Pi and your laptop/desktop.
- Capture those packets using Wireshark and verify the transport layer protocol and the ports used are TCP and 80, respectively.
- Repeat the same for TCP nodes, i.e., on one system you'll be using TCP out node and on the other system TCP in node.
- Capture the packets exchanged between those two systems and find their port number.
- Repeat the same for UDP nodes

Input nodes



Output nodes