

Labwork 1: Running the first script

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1 Conceptual

- **Node:** Representations of computing devices in simulations.
- **Channel:** Provides methods for managing communication subnetwork objects and connecting nodes to them.
- **Net Device:** Installed in a **Node** in order to enable the Node to communicate with other **Nodes** in the simulation via **Channels**.
- **Topology Helper:** Connecting **Net Devices** to **Nodes**, and **Net Devices** to **Channels**, assigning IP Addresses, etc.,

2 Run Program

```
At time +2s client sent 1024 bytes to 10.1.1.2 port 9
At time +2.00369s server received 1024 bytes from 10.1.1.1 port 49153
At time +2.00369s server sent 1024 bytes to 10.1.1.1 port 49153
At time +2.00737s client received 1024 bytes from 10.1.1.2 port 9
```

3 Scenerio

First a client (address 10.1.1.1) send a request to the server (address 10.1.1.2) 1024 bytes of data through port 9. Then the server receive the data through port 49153, afterward immediately send a response through the same port back to the client. After a few miliseconds, the client received the data through the port that send the request.

4 Protocols

- Link Control Protocol: Point to Point data link connecting exactly two devices
- Internet Stack Protocol: Using an UDP with IPv4

5 Network Traffic

- Communication channel are specific DataRate and Delay.
- The UDP stack has specific MaxPacket, PacketSize and specific interval