

Ex9: Networking

Overview

The aim of this exercise is to get you familiarized with the socket programming in Linux. (This applies to any other variants of Linux systems). Sockets are endpoints of a two-way communication between two programs running on machines connected via a network. A TCP socket is bound to an IP and port number.

To read more on sockets refer:

https://en.wikipedia.org/wiki/Network_socket

<https://docs.oracle.com/javase/tutorial/networking/sockets/definition.html>

Structure

In this exercise, we create a simple client and server program that sends messages to each other and displays when received it. Client and server are running on the same host (Reptilian machine) and uses the same port number.

1. Write a client file that takes a port number as an Input argument. (ex: `./client 1234`)
2. Write a server file that takes the port number as an Input argument. (ex: `./server 1234`)
3. Start the server. (Start the Server first as this is the one that's accepting connections)
4. Open a new Reptilian terminal and start the client (same port that server is listening to)
5. As soon as the client is started, it sends the message said below, and server should display that message on the terminal and vice versa.

Note: You might have some issues connecting to *localhost*, that's expected, good luck!

Expected Output

A Client sends a message: "<Your Name>: <UFID>", the server should read that and print it.

The Server sends this message: "Welcome to the server running on REPTILIAN", the client should read that and print it.

Submissions

Submit the (1) client, (2) server source files, the (3) screenshot of client output and (4) screenshot of server output.