

## Distributed Systems

# UDP/IP Sockets Demo 3

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### Demo 3: Sending messages from a client to a server

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This sample program demonstrates how a client sends a bunch of messages to a server and how the server listens for them. The server loops on *recvfrom*, waiting for messages. When it gets a message, it prints it and waits for the next message.

To run this program, download the demo file and unzip it to create the `demo-udp-03` directory. If you are using a shared machine, you may want to change the port number defined in `port.h`. If you want to run the server on a different machine from the client, you will need to change the IP address that is defined in the client (`udp-send.c`). Then compile the file by running `make` or manually with:

```
gcc -o udp-send udp-send.c
gcc -o udp-recv udp-recv.c
```

Then run the server in one window:

```
./udp-recv
```

This is the server and you will see a message along the lines of:

```
waiting on port 21234
```

Run the client in another window:

```
./udp-send
```

You should immediately see a stream of messages:

```
Sending packet 0 to 127.0.0.1 port 21234
Sending packet 1 to 127.0.0.1 port 21234
Sending packet 2 to 127.0.0.1 port 21234
Sending packet 3 to 127.0.0.1 port 21234
Sending packet 4 to 127.0.0.1 port 21234
```

On the server, you should see messages indicating that packets were received:

```
waiting on port 21234
received 16 bytes
received message: "This is packet 0"
waiting on port 21234
received 16 bytes
received message: "This is packet 1"
waiting on port 21234
received 16 bytes
received message: "This is packet 2"
waiting on port 21234
received 16 bytes
received message: "This is packet 3"
waiting on port 21234
received 16 bytes
received message: "This is packet 4"
waiting on port 21234
```

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Last updated: September 18, 2014

