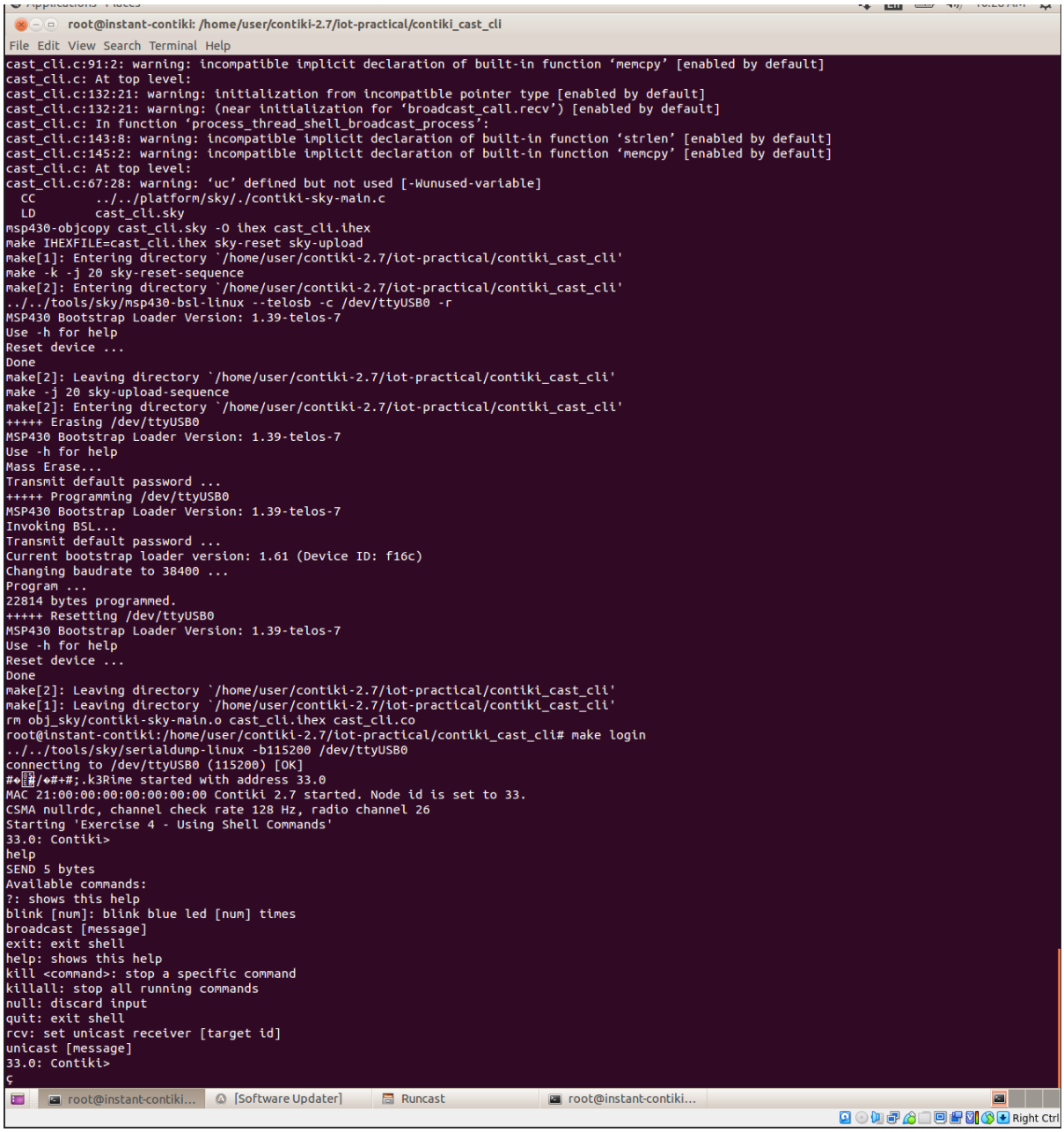
Q3 Broadcast and Unicast with command line interface.

Question 1: Revisiting the Broadcast and Unicast with command line shell interface

a) in the code above, we set up the command line interface and register and implement some commands. compile and upload the code and type "make login". Then, type "blink 10" and observe what happens. Check in the code where this is implemented, explain!.

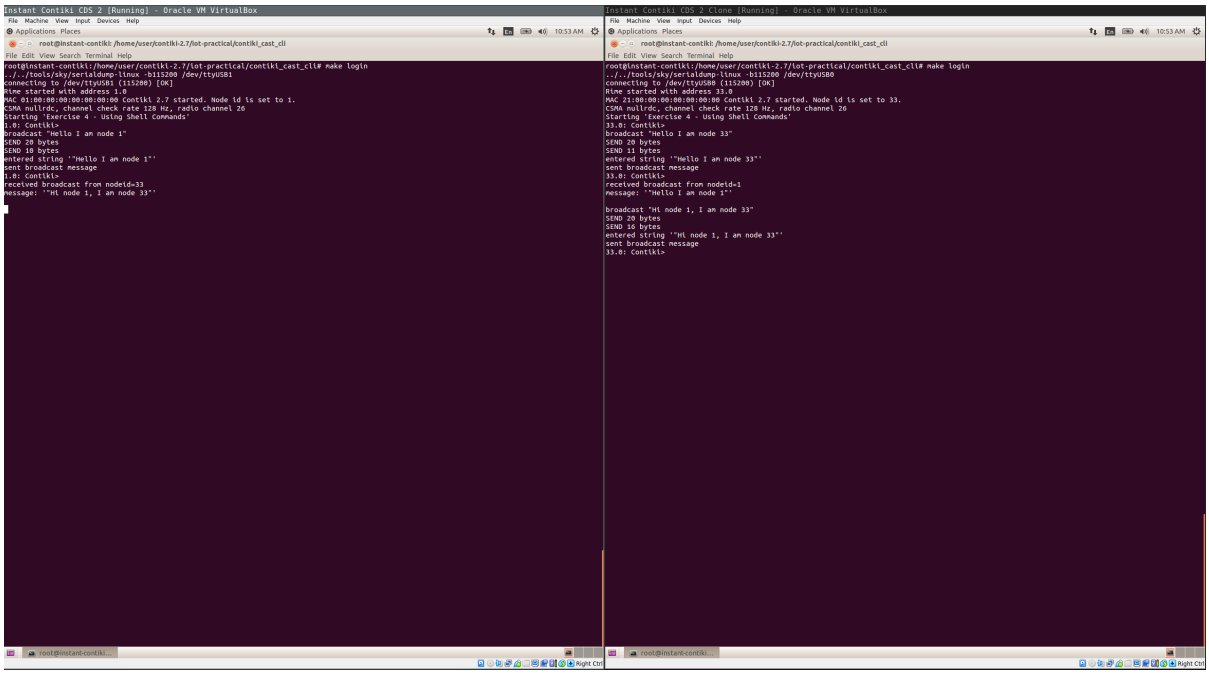
The Blue LED light blinks 10 times

b) type "help". This displays you the list of commands which is registered. check the code in this file to see where which command is defined, implemented and registered!



c) the command "broadcast" can be run from the shell. The command takes the input string from the interface and puts it into a broadcast packet. It then sends this over the radio. However, the second node does not get it. Why?

Well it somehow works. The Problem here is that the `broadcast_open` command is only called once a node sends a broadcast. Thus as soon as the first broadcast is sent from a node then it starts receiving (as the callback is registered).

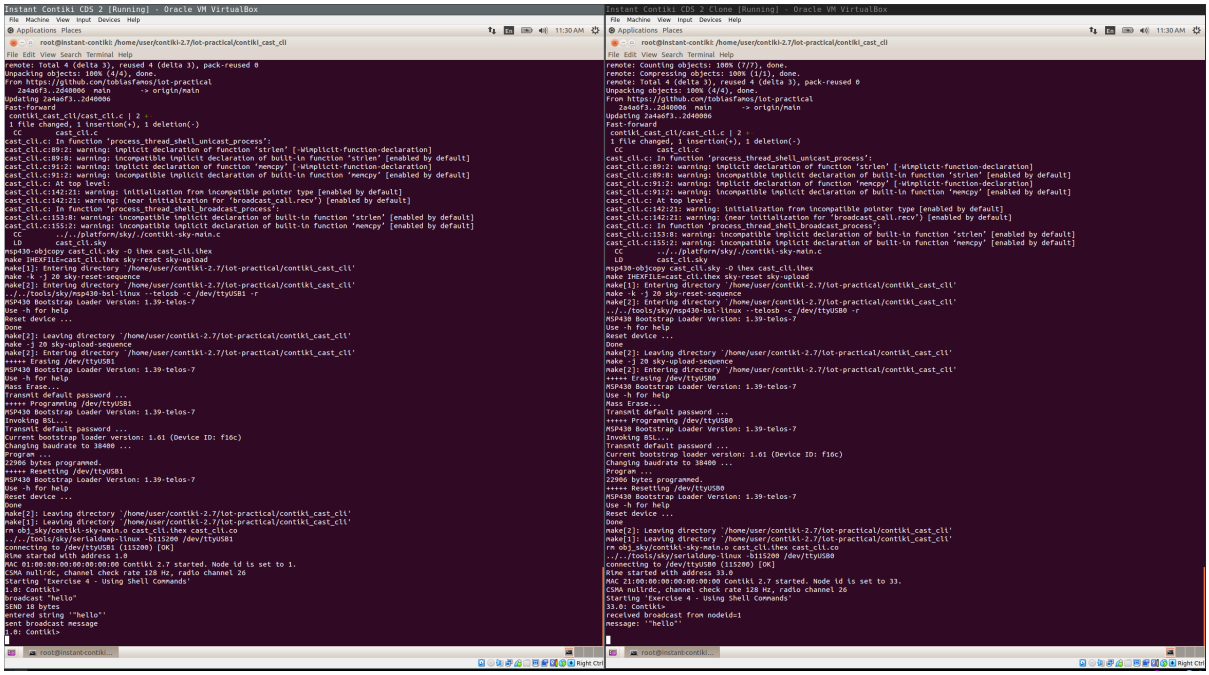


The initial state of the application: The broadcast channel is not initialized by default but only when the node starts to send a broadcast itself. Thus the first message on the right is not received by the left.

This can be seen in the below screenshot of two nodes. The first message from the right node is not received by the left node as the broadcast is not yet initialized. But after the left node sends something it can also receive.

To do so the following call must be added to the main process (`exercise_4_process`)

```
broadcast_open(&bc, BROADCAST_CHANNEL, &broadcast_call);
```



After initializing the broadcast also the first message is received.

d) The command "rcv" sets the receipient of the unicast command. The "unicast" command then takes the string argument, and shall send it to the unicast receipient. Hoewever, you should complete this program, using your knowledge from previous exercises.

Is implemented pretty straight forward. Only to mention: I also had to implement the channel as in the broadcast in the main process.

Here is a demonstration of a working unicast message