IoT: Client Devices

Moving onto ARM

```
1 ./makefile-x86_64                                                    Bufs
 1 CC=gcc
 2 CCFLAGS=
 3 INCLUDES=
 4 LFLAGS=-L/usr/lib/x86_64-linux-gnu
 5 LIBS=-lcurl -lpthread
 6
 7 SRC=requestor.c
 8 OBJ=$(SRC:.c=.o)
 9 MAIN=test
10
11 RM=rm -rf
12
13 .c.o:
14   $(CC) $(CFLAGS) $(INCLUDES) -c $< -o $@
15
16 $(MAIN): $(OBJ)
17   $(CC) $(CCFLAGS) $(INCLUDES) -o $(MAIN) $(OBJ) $(LFLAGS) $(LIBS)
18
19 all: $(MAIN)
20
21 clean:
22   $(RM) $(MAIN) *.o *~
```

x86 Makefile

Usual Toolchain

```
1 ./makefile-arm                                                    Bufs
 1 BUILDROOT_HOME=/home/cclamb/buildroot-2016.11
 2
 3 CC=$(BUILDROOT_HOME)/output/host/usr/bin/arm-linux-gcc
 4 CFLAGS=--sysroot=$(BUILDROOT_HOME)/output/staging
 5 INCLUDES=
 6 LFLAGS=
 7
 8 LIBS=-lcurl -uClibc -lc
 9
10 SRC=requestor.c
11 OBJ=$(SRC:.c=.o)
12 MAIN=test
13
14 RM=rm -rf
15
16 .c.o:
17   $(CC) $(CFLAGS) $(INCLUDES) -c $< -o $@
18
19 $(MAIN): $(OBJ)
20   $(CC) $(CFLAGS) $(INCLUDES) -o $(MAIN) $(OBJ) $(LFLAGS) $(LIBS)
21
22 all: $(MAIN)
```

ARM Makefile

Surprise! Buildroot creates a toolchain for you!

Rebuild the Project

Make sure you have the right IP first

- requestor.c needs to have the IP address of your host

Check the BUILDROOT_HOME

- Needs to point to your BUILDROOT home directory

MAKE -F MAKEFILE-ARM

- …or use an alias: alias amake=“make -f makefile-arm”

SCP and Test

SCP THE NEW PROGRAM TO YOUR ARM GUEST

- scp -P 2222 test user@localhost:~/

SIMPLEHTTPSERVER ON THE HOST

- python -m SimpleHTTPServer

TEST FROM THE GUEST

- curl -v www.cnn.com,
- curl -v <host_ip_address>
- ./test