

# Code Contributions

## Open SSL

### Compiling

- Using browser, download tarball <https://www.openssl.org/source/>
- `cd ~projects/`
- `tar -zxvf ../Downloads/openssl-1.1.0h.tar.gz`
- `cd openssl-1.1.0h`
- `export INSTALL_DIR=/opt/compiled-arm-linux/openssl-1.1.0`
- `sudo mkdir -p $INSTALL_DIR`
- `./Configure linux-generic32 shared --prefix=$INSTALL_DIR --openssldir=$INSTALL_DIR \`  
`--cross-compile-prefix=/opt/gcc-linaro-5.3-2016.02-x86_64_arm-linux-gnueabi/bin/arm-linux-gnueabi-`

```
>>Configuring OpenSSL version 1.1.1-pre9-dev (0x10101009L) for linux-generic32
>>Using os-specific seed configuration
>>Creating configdata.pm
>>Creating Makefile .... <SNIP>
```

- `make clean`
- `make depend`
- `make`
- ~~`make test`~~ (wrong architecture, can't run here :-)
- `sudo make install`

### Installing on target

- `/opt/compiled-arm-linux/openssl-1.1.0/lib/libcrypto.so.1.1` to `/usr/lib/arm-linux-gnueabi/`
- `/opt/compiled-arm-linux/openssl-1.1.0/lib/libssl.so.1.1` to `/usr/lib/arm-linux-gnueabi/`

## Mosquitto MQTT

### Compiling

- Using browser, download tarball <https://mosquitto.org/download/>
- `cd ~projects/`
- `tar -zxvf ../Downloads/mosquitto-1.5.tar.gz`
- `cd mosquitto-1.5`
- `cmake -DCMAKE_TOOLCHAIN_FILE=/home/politick/projects/Toolchain-arm-linux-gnueabi.cmake \`  
`-DCMAKE_INSTALL_PREFIX=/opt/compiled-arm-linux/mosquitto-1.5`
- `make clean`

- make depend
- make
- sudo mkdir -p /opt/compiled-arm-linux/mosquitto-1.5
- sudo make install

## Deployment

You need to transfer these sources:

- /opt/compiled-arm-linux/mosquitto-1.5/sbin/mosquitto
- /opt/compiled-arm-linux/mosquitto-1.5/etc/mosquitto/mosquitto.conf to /etc/mosquitto/mosquitto.conf

On the Target system:

- adduser mosquitto (may want to remove login rights)