

See these source pages first, for source code/author of signal-cli:

<https://github.com/AsamK/signal-cli>

<https://github.com/AsamK/signal-cli/discussions/393#discussioncomment-246169>

Manually building signal-cli v0.7.1 for on a Raspberry Pi

Below are the steps which worked for me, in December 2020, on a **Raspberry Pi 3B with Raspbian GNU/Linux 10 (buster)**

- Replace 'pi' with your used username on the Raspberry
- Replace '1234' with your raspberry pi hostname

Install required packages to be able to build signal-cli and dependent zklibrary

```
[pi@1234 ~]$ mkdir -p /home/pi/_downloaded
```

Install latest JAVA JDK (v11.0.9.1)

```
[pi@1234 ~]$ sudo apt update
```

```
[pi@1234 ~]$ sudo apt install default-jdk
```

```
[pi@1234 ~]$ java --version
```

Install latest version (v6.7.1) of Gradle

(<https://gradle.org/install/>)

Copy down binary-only from: <https://gradle.org/next-steps/?version=6.7.1&format=bin>

```
[pi@1234 ~]$ wget -P /home/pi/_downloaded https://services.gradle.org/distributions/gradle-6.7.1-bin.zip
```

```
[pi@1234 ~]$ sudo mkdir /opt/gradle
```

```
[pi@1234 ~]$ sudo unzip -d /opt/gradle /home/pi/_downloaded/gradle-6.7.1-bin.zip
```

Add gradle to the PATH:

```
[pi@1234 ~]$ export PATH=$PATH:/opt/gradle/gradle-6.7.1/bin
```

Check if all is ok by getting the version of Gradle:

```
[pi@1234 ~]$ gradle -v
```

Gradle 6.7.1

Install Rust:

<https://www.rust-lang.org/tools/install>

Run the below and follow instructions:

```
[pi@1234 ~]$ curl --proto '=https' --tlsv1.2 -sSf https://sh.rustup.rs | sh
```

Choose 1 Proceed with installation (default)

Once finished, add rust to the Path

```
[pi@1234 ~]$ export PATH="$PATH:/home/pi/.cargo/bin"
```

Check rust is working by getting its version:

```
[pi@Home ~]$ rustup --version
```

```
rustup 1.23.1 (3df2264a9 2020-11-30)
```

info: This is the version for the rustup toolchain manager, not the rustc compiler.

Get and build zkgroup library:

Download the Source code for zkgroup library v0.7.1 (<https://github.com/signalapp/zkgroup/releases>)

```
[pi@1234 ~]$ wget -O /home/pi/_downloaded/zkgroup-0.7.1.zip https://github.com/signalapp/zkgroup/archive/v0.7.1.zip
```

Extract content of zkgroup-0.7.1.zip to /home/pi:

```
[pi@1234 ~]$ unzip -d /home/pi /home/pi/_downloaded/zkgroup-0.7.1.zip
```

```
[pi@1234 ~]$ cd /home/pi/zkgroup-0.7.1
```

Check rustc version:

```
[pi@1234 ~]$ rustc --version
```

```
rustc 1.41.1 (f3e1a954d 2020-02-24)
```

```
[pi@1234 ~]$ make libzkgroup (note this takes several minutes (~6) to complete)
```

Once finished, the required file is: /home/pi/zkgroup-0.7.1/target/release/libzkgroup.so

Build signal-cli

<https://github.com/AsamK/signal-cli> "Building" section:

```
[pi@1234 ~]$ mkdir /home/pi/signal-cli_source
```

```
[pi@1234 ~]$ cd /home/pi/signal-cli_source
```

```
[pi@1234 ~]$ git clone https://github.com/AsamK/signal-cli.git
```

```
[pi@1234 ~]$ cd ./signal-cli
```

```
[pi@1234 ~]$ gradle build (note this takes several minutes (~10) to complete)
```

```
[pi@1234 ~]$ gradle installDist
```

```
[pi@1234 ~]$ gradle distTar
```

Update jar file with updated libzkgroup.so file

```
[pi@1234 ~]$ cd /home/pi/zkgroup-0.7.1/target/release/
```

```
[pi@1234 ~]$ zip -u /home/pi/signal-cli_source/signal-cli/build/install/signal-cli/lib/zkgroup-java-0.7.0.jar libzkgroup.so
```

Copy JAR File

```
[pi@1234 ~]$ cd /home/pi/signal-cli_source/signal-cli/build/distributions
```

```
[pi@1234 ~]$ mkdir -p signal-cli-0.7.1/lib/
```

```
[pi@1234 ~]$ cp /home/pi/signal-cli_source/signal-cli/build/install/signal-cli/lib/zkgroup-java-0.7.0.jar signal-cli-0.7.1/lib/
```

Update ZIP file

```
[pi@1234 ~]$ zip -u /home/pi/signal-cli_source/signal-cli/build/distributions/signal-cli-0.7.1.zip signal-cli-0.7.1/lib/zkgroup-java-0.7.0.jar
```

Update TAR file

```
[pi@1234 ~]$ tar --delete -vPf /home/pi/signal-cli_source/signal-cli/build/distributions/signal-cli-0.7.1.tar  
signal-cli-0.7.1/lib/zkggroup-java-0.7.0.jar  
[pi@1234 ~]$ tar --owner="" --group="" -rvPf /home/pi/signal-cli_source/signal-  
cli/build/distributions/signal-cli-0.7.1.tar signal-cli-0.7.1/lib/zkggroup-java-0.7.0.jar
```

Updated signal-cli-0.7.1.tar is now in: /home/pi/signal-cli_source/signal-cli/build/distributions/

Install/export signal-cli

```
[pi@1234 ~]$ sudo tar xf /home/pi/signal-cli_source/signal-cli/build/distributions/signal-cli-0.7.1.tar -C  
/opt  
[pi@1234 ~]$ sudo ln -sf /opt/signal-cli-0.7.1/bin/signal-cli /usr/local/bin/
```

- signal-cli is now installed on the Raspberry Pi