1) MQTT no ESP01,ESP8266 -> Belisário

2) Instalação Mosquitto na RPI e configuração -> Ari

instalei o mosquitto Eclipse, instalei a paho\_mqtt

rodei o comando:

**configurar websocket no mosquitto**

**mosquitto\_sub -t test -h localhost**

**senha rasp redes22108**

**-verificar conexão com certificado -> openssl**

[**https://medium.com/tht-things-hackers-team/instalar-mqtt-broker-no-linux-debian-ubuntu-f8861da70ef6**](https://medium.com/tht-things-hackers-team/instalar-mqtt-broker-no-linux-debian-ubuntu-f8861da70ef6)

**https://qastack.com.br/ubuntu/815091/how-do-i-start-mosquitto-mqtt-broker-on-startup-in-ubuntu-16-04**

<https://bytesofgigabytes.com/mqtt/installing-mqtt-broker-on-linux/>

<https://bytesofgigabytes.com/mqtt/linux-terminal-as-publisher-and-subscriber/>

<http://www.steves-internet-guide.com/mosquitto-tls/>

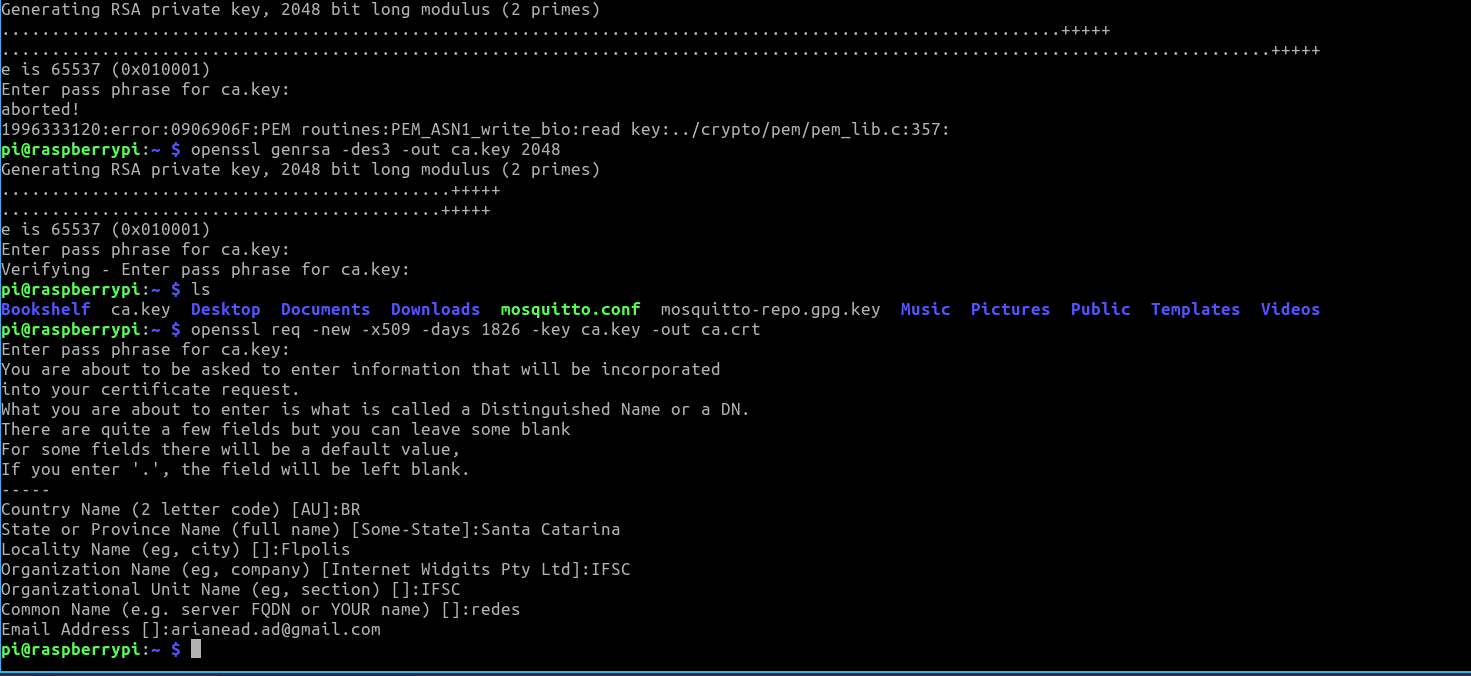
<http://www.steves-internet-guide.com/mqtt-websockets/>

<https://stackoverflow.com/questions/34408624/how-do-i-enable-both-tcp-and-web-sockets-in-mosquitto>

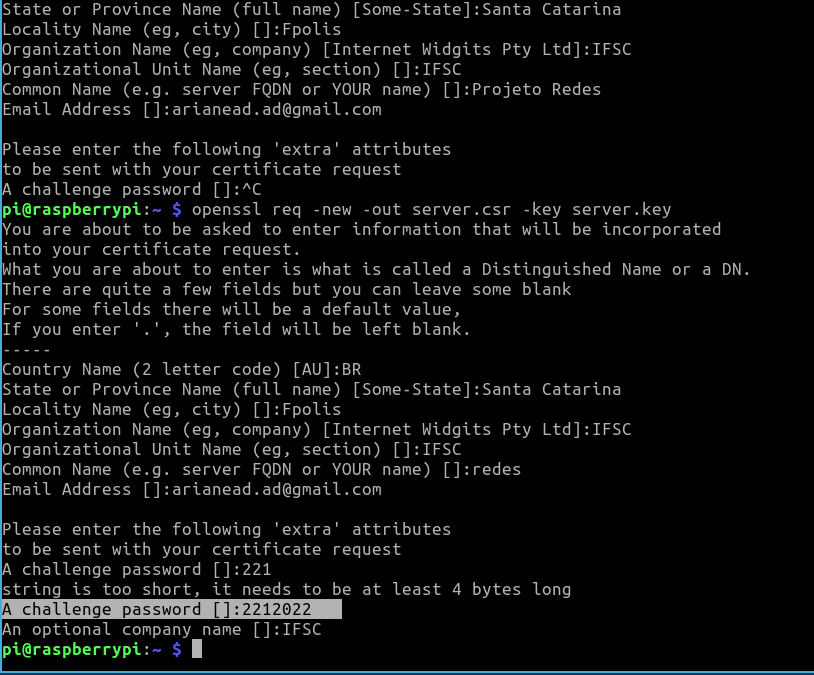
redes221082022 -> ca key pass phrase

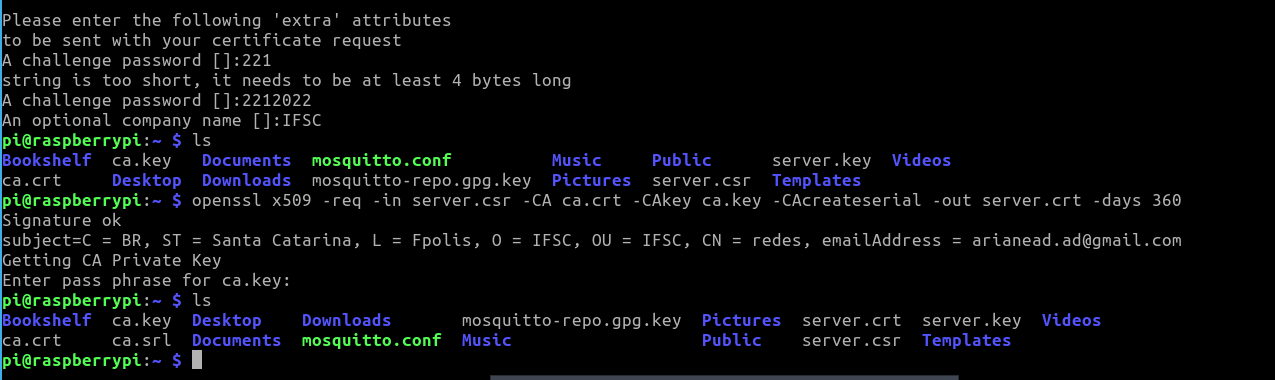
rasp senha para conectar via ssh: redes22108

**common name: redes**



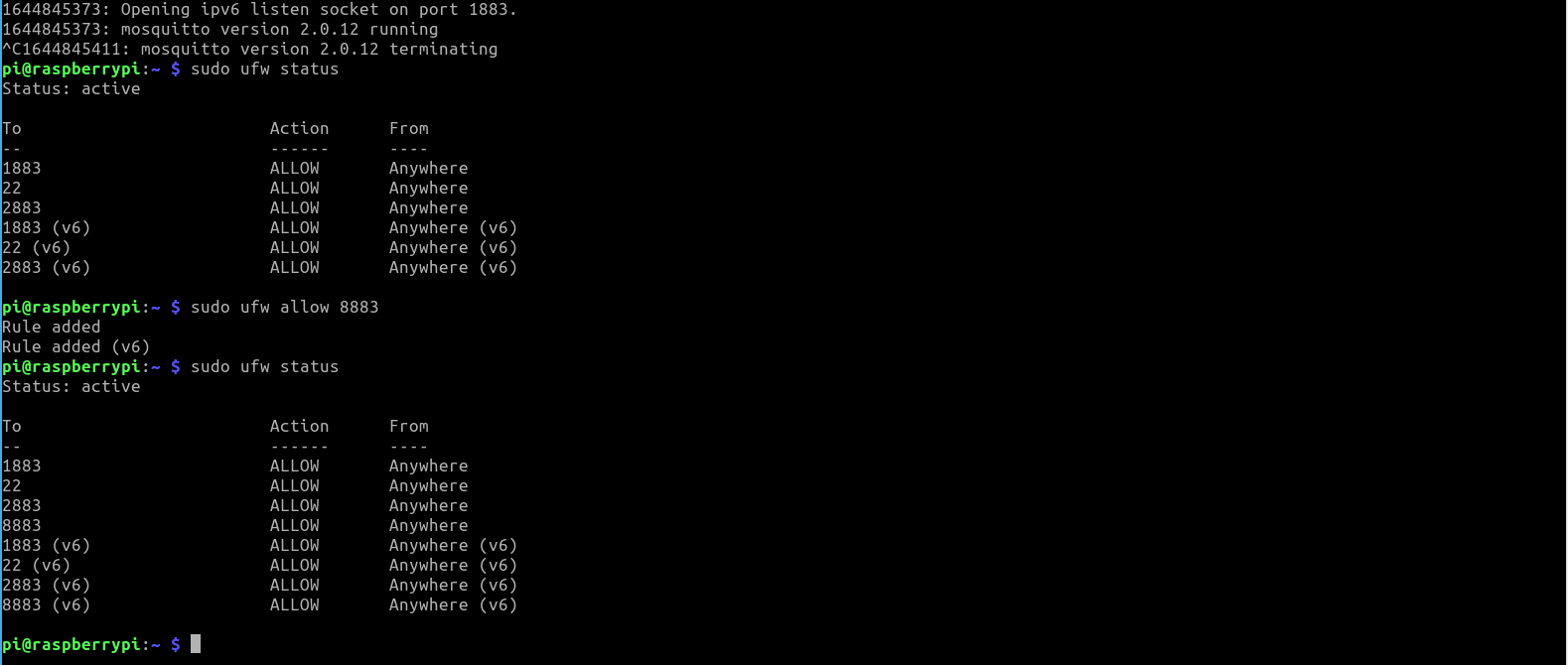
**A challenge password :2212022**





permitir porta: **sudo ufw allow porta**

**sudo ufw status**



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3) WebSocket -> JavaScript -> Biblioteca paho -> Jade

<https://www.eclipse.org/paho/index.php?page=clients/js/index.php>

<https://github.com/eclipse/paho.mqtt.java>

<https://www.adoclib.com/blog/eclipse-paho-javascript-client-and-browser-support.html>

<http://www.steves-internet-guide.com/into-mqtt-python-client/>

<http://www.steves-internet-guide.com/using-javascript-mqtt-client-websockets/>

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