**Setup Automation**

To streamline the deployment and configuration process, this is an automated script that sets up COAP server, configures DTLS, installs Certbot, and manages SSL certificates. Below is the script used for this PoC:

#!/bin/bash

echo "Starting DTLS Implementation for CoAP Server"

sudo apt-get update -y

sudo apt-get install -y certbot

sudo certbot certonly --standalone --preferred-challenges http --key-type ecdsa -d tls-solution.com

openssl pkcs12 -export -in /etc/letsencrypt/live/tls-solution.com/fullchain.pem \

-inkey /etc/letsencrypt/live/tls-solution.com/privkey.pem \

-out coap-server.p12 -name "coap-server"

sudo apt-get install -y pkg-config libtool autoconf automake build-essential asciidoc doxygen

git clone https://github.com/obgm/libcoap.git

cd libcoap

./autogen.sh

./configure --enable-shared --enable-dtls

make

sudo make install

sudo openssl pkcs12 -in coap-server.p12 -nocerts -out server-key.pem -nodes

sudo openssl pkcs12 -in coap-server.p12 -clcerts -nokeys -out server-cert.pem

sudo openssl pkcs12 -in coap-server.p12 -clcerts -nokeys -out ca-cert.pem

coap-server -k server-key.pem -c server-cert.pem -C ca-cert.pem -p 5684

coap-client -m get coap://tls-solution.com:5684/

echo "DTLS Implementation for CoAP Server completed successfully!"

**Steps to use the script**

1. Create a new file for the script: nano new\_file.sh
2. Paste the automated script into the file. Make sure to replace tls-solution.com with your actual domain name
3. Change the script’s permissions to make it executable: sudo chmod +x new\_file.sh
4. Execute the script to perform the setup: sudo ./new\_file.sh