CC31xx SSL Demo Application

Overview

This is a sample application demonstrating how to use the certificate files and establish an SSL connection w/ CC3100. SSL certificates are designed to provide two principles, privacy and authentication. Privacy is achieved by encryption/decryption and authentication is achieved by signature/verification. The certificates must be pre-loaded to the serial-flash. It is possible to flash 5 sets of SSL certificates to the device using the CCS_UniFlash [1] utility.

Note: This wiki page is only applicable for **CC3100-SDK v1.0.0** and upward releases. For documentation on older SDKs' examples, refer corresponding file in **<cc3100-sdk-installation-location>\cc3100-sdk\docs\examples**

Application details

The application:

- connects to an open AP
- gets the server name via a DNS request
- defines all socket options and points to the CA certificate
- connects to the server via TCP

Usage

Prerequisite: This application requires an access-point with internet connectivity

- Connect the board to a Windows-PC and configure the terminal-program for seeing the logs - [| CC31xx_&_CC32xx_Terminal_Setting_Wiki [2]] has detailed instructions for configuring the terminal-program
- Download the required certificate file at **/cert/google.der** on sFLASH using CCS UniFlash [1] utility. For detailed instructions refer to Uniflash user guide.
- Edit 'sl_common.h' and update the following parameters for the device to establish connection w/ the access-point

```
#define SSID_NAME       "<ap_name>"
#define SEC_TYPE        <security-type>
#define PASSKEY         ""
```

- Edit 'sl_common.h' and update the following parameters to update the device time

```
#define DATE                24
#define MONTH               7
#define YEAR                2014
#define HOUR                17
#define MINUTE              30
#define SECOND              0
```

- Build and launch the project
- Application will connect to Google server
- See the self explanatory logs on the terminal-program's console. On success, below message will be displayed on the terminal

Limitations/Known Issues

- SSL certificates must be pre-loaded to the serial flash
- SSL certificates are not encrypted
- SSL certificates should use .der format
- Only 5 sets of SSL certificates can be used concurrently

References

[1] http://www.ti.com/tool/uniflash

[2] http://processors.wiki.ti.com/index.php/CC31xx_&_CC32xx_Terminal_Setting

Article Sources and Contributors

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