

# Configure CSR for CMS with OpenSSL for Encryption

## Contents

[Introduction](#)

[Prerequisites](#)

[Components Used](#)

[Configure](#)

[Verify](#)

## Introduction

This document describes how to create certificates for Cisco Meeting Server (CMS) with Open Secure Sockets Layer (OpenSSL).

Contributed by Moises Martinez, Cisco TAC Engineer.

## Prerequisites

Cisco recommends that you have knowledge of these topics:

- Open SSL.
- CMS configuration.

## Components Used

The information in this document is based on these software:

- OpenSSL Light 1.1

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Configure

Step 1. Download OpenSSL Light 1.1.

Step 2. Install OpenSSL in your computer.

Step 3. Navigate to the folder where SSL was installed. Usually it is installed on **C:\Program Files\OpenSSL-Win64\bin**.

< Local Disk (C:) > Program Files > OpenSSL-Win64 > bin >

Name	Date modified	Type	Size
PEM	12/16/2021 4:59 PM	File folder	
CA.pl	3/25/2021 10:34 PM	PL File	8 KB
capi.dll	3/25/2021 10:34 PM	Application exten...	68 KB
dasync.dll	3/25/2021 10:34 PM	Application exten...	44 KB
libcrypto-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	3,331 KB
libssl-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	667 KB
openssl.exe	3/25/2021 10:34 PM	Application	531 KB
ossltest.dll	3/25/2021 10:34 PM	Application exten...	43 KB
padlock.dll	3/25/2021 10:34 PM	Application exten...	39 KB
progs.pl	3/25/2021 10:34 PM	PL File	6 KB
tsget.pl	3/25/2021 10:34 PM	PL File	7 KB

Step 4. Open the **Notepad** and enter the information needed for the Certificate Signing Request (CSR) as showed in the next example:

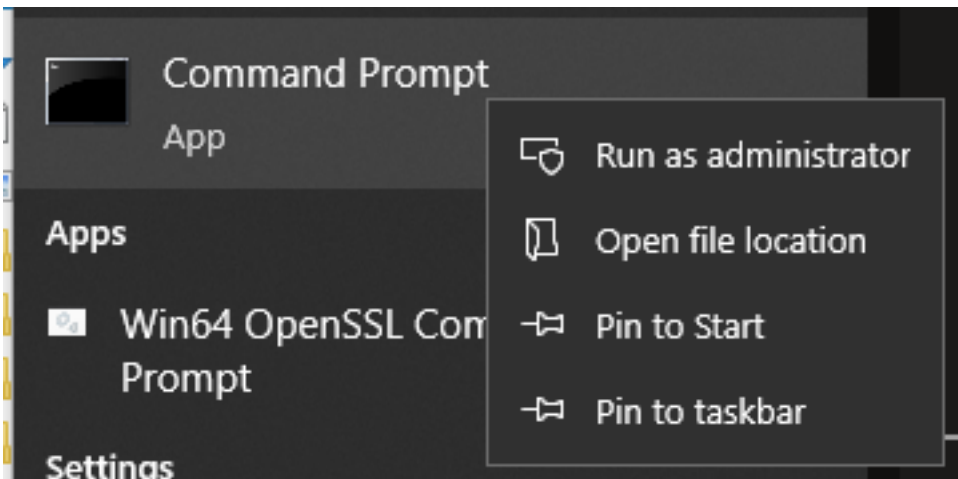
```
[req] distinguished_name = req_distinguished_name req_extensions = v3_req prompt = no
[req_distinguished_name] C = US ST = California L = San Jose O = TAC OU = IT CN =
cms.tac.cisco.com [v3_req] extendedKeyUsage = serverAuth, clientAuth subjectAltName = @alt_names
[alt_names] DNS.1 = webbridge3.tac.cisco.com DNS.2 = webadmin.tac.cisco.com DNS.3 =
xmpp.tac.cisco.com
```

Step 5. Once the information is entered for the CSR this file is saved as **tac.conf** in the next path: **C:\Program Files\OpenSSL-Win64\bin**.

Local Disk (C:) > Program Files > OpenSSL-Win64 > bin

Name	Date modified	Type	Size
PEM	12/16/2021 4:59 PM	File folder	
CA.pl	3/25/2021 10:34 PM	PL File	8 KB
capi.dll	3/25/2021 10:34 PM	Application exten...	68 KB
dasync.dll	3/25/2021 10:34 PM	Application exten...	44 KB
libcrypto-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	3,331 KB
libssl-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	667 KB
openssl.exe	3/25/2021 10:34 PM	Application	531 KB
ossltest.dll	3/25/2021 10:34 PM	Application exten...	43 KB
padlock.dll	3/25/2021 10:34 PM	Application exten...	39 KB
progs.pl	3/25/2021 10:34 PM	PL File	6 KB
tsget.pl	3/25/2021 10:34 PM	PL File	7 KB
tac.conf	12/16/2021 5:07 PM	CONF File	1 KB

Step 6. Open the **Command Prompt** on the PC and select to be **Run as administrator**.



Step 7. Navigate to the path where the file is stored via command prompt, enter command **openssl.exe** and select enter.

```
C:\Program Files\OpenSSL-Win64\bin>openssl.exe
```

Step 8. Run the next command: **req -new -newkey rsa:4096 -nodes -keyout cms.key -out cms.csr -config tac.conf**.

```
C:\Program Files\OpenSSL-Win64\bin>openssl.exe
OpenSSL> req -new -newkey rsa:4096 -nodes -keyout cms.key -out cms.csr -config tac.conf
```

```
C:\Program Files\OpenSSL-Win64\bin>openssl.exe
OpenSSL> req -new -newkey rsa:4096 -nodes -keyout cms.key -out cms.csr -config tac.conf
Generating a RSA private key
.....++++
writing new private key to 'cms.key'
-----
```

## Verify

If no errors are displayed two new files are generated in the same folder:

- **cms.key**
- **cms.csr**



Name	Date modified	Type	Size
PEM	12/16/2021 4:59 PM	File folder	
CA.pl	3/25/2021 10:34 PM	PL File	8 KB
capi.dll	3/25/2021 10:34 PM	Application exten...	68 KB
dasync.dll	3/25/2021 10:34 PM	Application exten...	44 KB
libcrypto-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	3,331 KB
libssl-1_1-x64.dll	3/25/2021 10:34 PM	Application exten...	667 KB
openssl.exe	3/25/2021 10:34 PM	Application	531 KB
ossltest.dll	3/25/2021 10:34 PM	Application exten...	43 KB
padlock.dll	3/25/2021 10:34 PM	Application exten...	39 KB
progs.pl	3/25/2021 10:34 PM	PL File	6 KB
tac.conf	12/16/2021 5:07 PM	CONF File	1 KB
tsget.pl	3/25/2021 10:34 PM	PL File	7 KB
cms.csr	12/16/2021 5:25 PM	CSR File	2 KB
cms.key	12/16/2021 5:25 PM	KEY File	4 KB

This new file **cms.csr** can be signed by a Certificate Authority (CA).