



How to Generate an SSL Certificate and Enable SSL Service

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Applied to

GV-System

GV-IP Camera

GV-Recording Server/GV-Video Gateway

Summary

The GV-System, GV-IP Camera and GV-Recording Server/GV-Video Gateway all support Secure Sockets Layer (SSL) protocol to ensure the security and privacy of remote connection. To enable the SSL service, you need to import an SSL Certificate file and/or a Private Key file into the server or GV device. The document will guide you through the steps of generating a Certificate Signing Request (CSR) and a Private Key (RSA) through a third-party tool. Then verify the CSR by a SSL authority to obtain a SSL Certificate. Finally, import the SSL Certificate and Private Key files into the server or GV device.

Note: The CSR verification by an SSL authority is normally a charged service.

Instructions

1. Generate a Certificate Signing Request (CSR) and Private Key (RSA) through a third-party tool.

A 、 We use the following third-party tool as the example:

http://www.gogetssl.com/eng/support/online_csr_generator/



You will be requested to type your server's IP address and your personal information to get started.

Generate CSR, Online CSR Generator, Generate 2048-bit CSR
Home » Support » Online CSR Generator

2048-bit CSR Generator is for Certificate Signing Request (CSR) which is a message sent from an applicant to a certificate authority in order to apply for a digital identity certificate. This is widely using in Secure Sockets Layer (SSL) registration, Transport Layer Security (TLS) activation and most of the modern servers. Generated SSL Private Key and CSR can be sent to your email

Please input the text in English to Generate CSR

Common Name: *	https://	Common name
Organization: *		In English
Department: *		Like: IT Dept
City: *		For example: New York
State: *		For example: Alabama or None
Country: *	--Select Country--	
Email: *		Email address
Send to Email:	<input checked="" type="checkbox"/>	Generated CSR & Private Key will be emailed to you instantly

Generate CSR

B - The Certificate Signing Request (CSR) and Private Key (RSA) contents are created as the example below.

Your SSL Private Key and CSR for www.geovision.com.tw
Please save this information in a safe place!

Certificate Signing Request(CSR)

```
-----BEGIN CERTIFICATE REQUEST-----
MIIC4jCCACOCAwAgZmxkZGZjYm9hbnVBAEYTA1RMMQ8wDQYDVQQIEwZ0YWN1M3Y1W4xZDAN
BgNVBAcTbnRhaXBlb1RTESMBAEYTA1RMMQ8wDQYDVQQLEwN0YXUxOjEwLWVudm1zaW9uMjwv
HTAbBgNVBAMTFHd3dy5nZW92aXNpb24uY29tLnR3MSowKAUJKoz2IhvcNAQkBFhtq
b31jZWNoYW5nQGd1b3Zpc21vbi15bj20udHcwggE1MA0GCSqGSIb3DQEBAAQUAA4IB
DwAwggEKAAIBAQGd1b3Zpc21vbi15bj20udHcwggE1MA0GCSqGSIb3DQEBAAQUAA4IB
Uhtjfp-cbC80IQRkq4LpZjKkAy+cm/f19nwCmgTlUS+UjEuWq/3b6VwQoUG3rR+
k0fmqSa77HS1J0atpacARidwhkWk925go3bF06I+FM4BEEjYeFv/yHy6PcS5H
dUguawLLMes11kt6W9/skAdIXkbQUGShFWWU0Xmw0zX5ptmcc6ygbp9Cu63rt+I
cAC3mxLrhqA0VfdmRTTMeclenB/KZdVURgcbpOxkxq1aSNKcdKH1YQ0UVTba1cK
p0o6c5YadiVqD1W9anWtReXoV73y1QCDE17AgMBAAgDDANBgkqhkiG9w0BAQQF
AAQCAQEARHhQWcR8CHY1RY0amBuecLBjv9pd1HIQcE55621c/1zXsLXL690EQ
EFKHQn3SpzFP+cMkUeIEbnulDMCa11b/VFBeELDFBgBvFvKUKWkOCOTHTvpm0Je
VFXBovjctzZaIoFDQamG1zXpTcXb7z3pG5C1E117hGSMzy263B0TKE90M3iuR06W
Z1Lknh/H0H8O5i1XqLp1kZSn0KR1E4xtXrsRrTYVY9eQ+rs+MpBIRveYRXdbSdJ
+GMW2eWoi1fFi26fVPH1MRNcx2jaqvvmXDFN+Xz27TDn/SHwY/Obd1I/AN4Jb7W
149VS5t9R4Svq8FDpN4GY/CaCLZ0g==
-----END CERTIFICATE REQUEST-----
```

Your Private Server Key

```
-----BEGIN RSA PRIVATE KEY-----
MIIEpQIBAAKCAQEax15SbmIrsBr1UfJDMY256AEwQ8ej6mDWFzmqYKQ2FwXUu+S9
t1IbY36KEm6AvNCEEZ1OHC6WSZAMVnJv35fZ28ApoLZbkv13r1qv92+1bEKCRc60
fgNR8qhm0XpSTmaWnG1q4ncIZF9Jpdu1KRN23ou1PnTHuGBA12ZBz/5hSuT30b
B5V1Lml14HrCmZLLeEeV7CgHU8ZG011BkoRVlqj1LMzNM1+abZg68qmg6Qcrt67f
k3Aat5s0YagFL332kSU0zHndXpr/19nVbkam66aDe2MUGGkjY3ZBh2ED11022pb
SgXtured6GnY1eg9VpQ1UWX16FQ18JUAg4IuwIDAQABoIBAQCAoW8wduX9FHtn
igH6Yx23DPYSNkd52d0T1mJ21b1c1jF6tp54rJFLB8YmmGhmvtfnk7exYnM4gg
AFL9GVnQJt9xGJTRuTYOCChrWFFZ5zLVQ9qk7VpFftOwvDvTTR9qK0/8Y3vdoqQ
UIX44q1jUuA1xrh0cP9uVv55yWm556L1eu401fpp1DourSBG7QKxLEzseOg
jEGodE1VmjWfM5vQ182HC4A6sB41PONXaIonz+eVAKP4Juo+mhoUJ0ezgBXJ+1
Y4c03RA+LZG2AYm41s0/618sSKKzPOLc1cnIf+mNAI36n1F3Noimddu3Wo2i
EuL2UPtJAoGBAFUdweGCK7qT3XtdBdbU1qIZDGs3Ld0Zq7cy3YFht9vfe4/7YEOT
2fdn40EknfIqinO32ReP2Lz6vqgtrcGxPnevYkMH+rwb/+PNE+PGGyT+Ug3I1Z
a5kIe1wRi7QFe3x/8BEHEX+gWkR8x5mxbCv1+JDDJ35p1If/0J4WymAoGBAM8t
Lmb9AcCd4ypVFT94juEgzA15WEF41Sa+DF2o1HZUUtjH1a+eCc/hgqiu9eg16jk
h6+/Rkmm+r9Uj/Lk2mEZLNSqLRGeBS0fDSFrWC5UCsFPDPAKsgwM/Oq1+AdY2
2rr31Qs2XJt918JeQcrrvN4hRc2BReoQHe04762pNa0GBA/M/nxaj4C8zWTZcfyEB
kLasKYO3EDeEzXyXpKtTmwvBId4UW0HReeUz2EbZEnFKEQv1Ipj+7UE6EXMB16XG
mBWq9p1McD4h9IQDlf+1TNZecJRd1FyqGyoNkM3y/0Iyy1hrqUL27264QNGbNA
w8D1wePQt6GN0KZbJnL97nH9AoGATqxSnaTq1igxzedIRZ9tEXJ04nH+/Q++h
Z211a3n5B8W81KY5zHWz+h/4Ako1UdqOqC+11obbG4MkMuuy/gxH7u8uFV9ZREUR
jrg48a00IXtYcYjLkTCnyLYaBxLYcbdc8kgFuS4E0z0JLYmy61QPL1RGNMQ50y
MHB81UCgYEAzUmjzrSqtckJZzvF8m4Hs1Kay/cgNgA0nUngWU25941egPyyWpC2
18Z8o24N0a+jepS37VZ35MEAc67xnRBEoVxsFm0d1g1hBeeCy+cX+6qTcyyY
oeNAUCc5YUbcnsCGGqB+ePw1uvzQ3Fpqh7F+gV123ksIt3EBXLI7G6=
-----END RSA PRIVATE KEY-----
```

A email containing this information has been sent to joycechang@geovision.com.tw



C、 Copy the RSA Private Key contents, and paste into a plain text file.



D、 Save the file with a .cer extension. Then your Private Key file is created, e.g.



Note: If you want to import the Private Key to the GV-Recording Server/GV-Video Gateway, you need to save the file with a .key extension.



2. Verify the Certificate Signing Request (CSR) by an SSL authority.

A. Take the Symantec as the example:

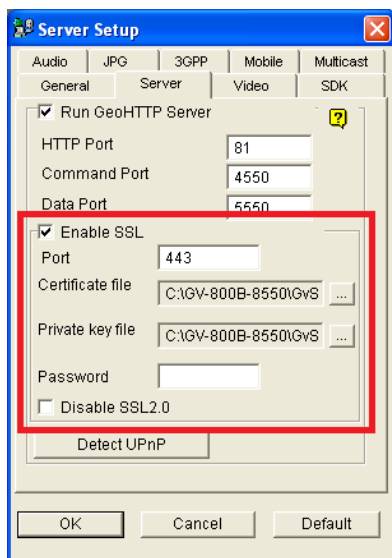
<http://www.symantec.com/products-solutions/products/family/ssl/>

B. Follow the instructions described on the above website. In certain step, you will be requested to paste the CSR contents which are generated in above Step1.

C. Finally you will receive an e-mail notification of the certificate as the example below.

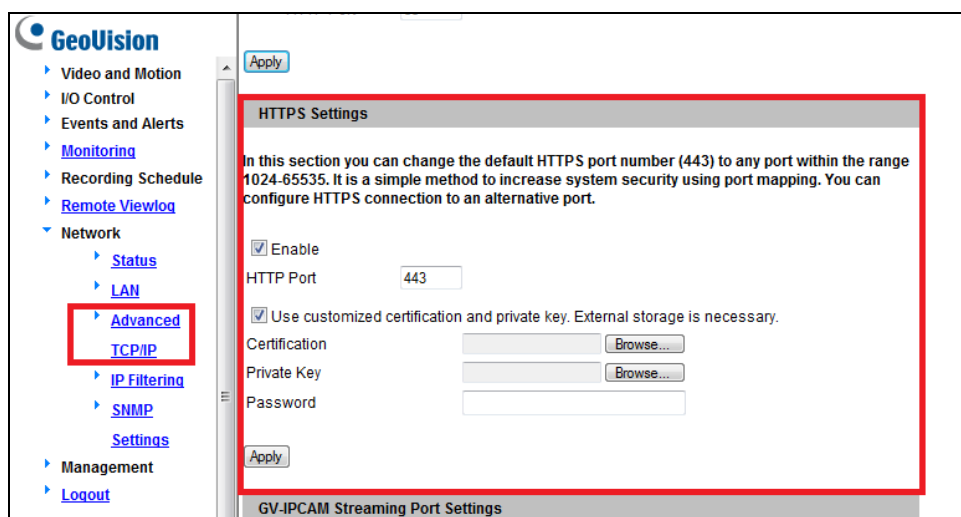


3. Import the SSL Certificate and Private Key files to the server or GV device.
 - A. On the GV-System, click the **Network** button, select **WebCam Server** and click the **Server** tab to display the following dialog box. Select **Enable SSL**, click the Browse button of **Certificate file** to import the SSL Certificate file (.cer), and click the Browse button of **Private key file** to import the Private Key file (.cer).



- B. On the Web Interface of GV-IP Camera, select **Network** and select **Advanced TCP/IP** to display the following page. Enable **HTTPS Settings** and select **Use customized certification and private key**. Click the Browse button of **Certificate** to import the SSL Certificate file (.cer), and click the Browse button of **Private Key** to import the Private Key file (.cer).

Note: These SSL options are only enabled after you install a memory card in the GV-IP Camera. And save the created SSL Certificate and Private Key files in the memory card first.





- C、 On the Web Interface of GV-Recording Server/GV-Video Gateway, select **Network** to display the following page. Enable **SSL**, click the Browse button of **Certificate File (.crt)** to import the SSL Certificate file, and click the Browse button of **Certificate Key File (.key)** to import the Private Key file.

The screenshot shows the 'Recording Server' web interface. On the left is a navigation menu with 'Network' selected and highlighted with a red box. The main content area is titled 'Network' and contains two sections: 'Information' and 'Setup'. The 'Information' section displays network details for the 'Intel(R) Gigabit CT Desktop Adapter(192.168.0.26)', including Mac Address (6805ca00-6845), IP Address (192.168.0.26), Subnet mask (255.255.252.0), Gateway (0.0.0.0), and DNS1/DNS2. The 'Setup' section includes an 'HTTP Port' set to 80 and an 'SSL' section. The 'SSL' section has a checked 'Enable' checkbox and three input fields: 'Port' (443), 'Certificate File(.crt):' (server.crt), and 'Certificate Key File(.key):' (server.key). Each of these three fields has a 'Browse' button to its right. A third field, 'Certificate Chain File(.crt):' (ca.crt), also has a 'Browse' button. At the bottom of the SSL section are 'Save' and 'Reload' buttons. A red rectangular box highlights the entire SSL configuration area.

Note: You might obtain a Certificate Chain File from some SSL authorities. In this case, you can also import the file to the server.
