globalscape
securely connected

KB#11348

QUESTION

How can I chain a certificate in PFX format?

ANSWER

The certificate chain is essentially a certificate path from signed cert to intermediate to CA root cert to indicate that the certificate is trusted.

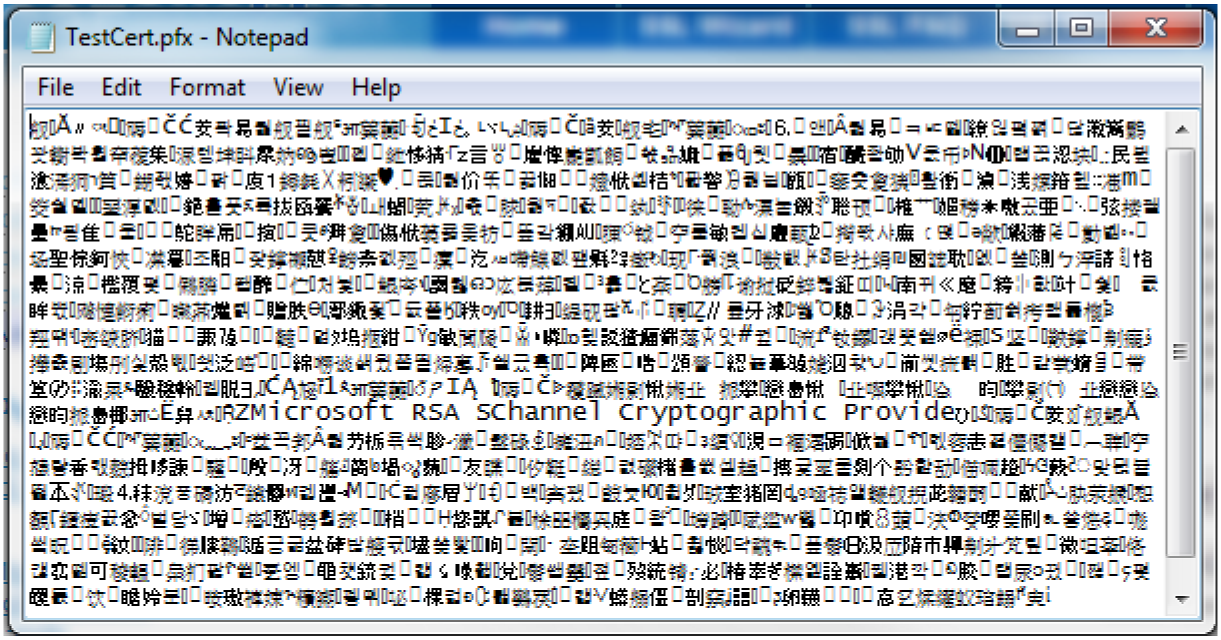
http://msdn.microsoft.com/en-us/library/windows/desktop/aa376515(v=vs.85).aspx
http://en.wikipedia.org/wiki/Certification_path_validation_algorithm

In some environments, Java and other application may have difficulty in validating the certificate chaining path if only the signed cert is provided

Chaining a certificate makes it easier for Java and other application in some environments to validate the certificate validity path. A chained cert basically has all of the certs in the certificate path chain in one file.

To chain a certificate, it is necessary to break apart the signed certificate , intermediate certificate (s), and root certificate into individual files and put them physically into one certificate file.

.pfx formatted certificates are encoded in such a way that make this difficult to do easily (if at all).

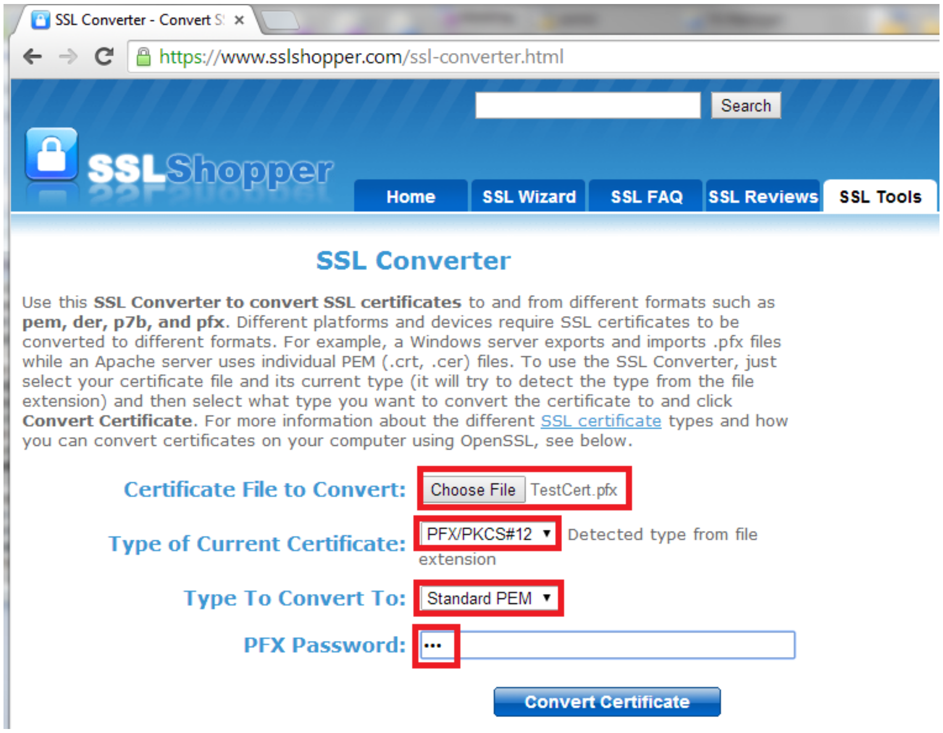


To chain a cert in **.pfx** format, it will first be necessary to convert the certificate to **.pem** format.

The absolute easiest way to do this is to use SSLShopper's online SSL Converter
(https://www.sslshopper.com/ssl-converter.html)
SSLShopper's online SSL Converter is an online version of OpenSSL's command line conversion utility
(http://slproweb.com/products/Win32OpenSSL.html)

It is preferable to use SSLShopper as it is much faster and eliminates potential human error in mistyping the conversion commands. SSLShopper's SSL Converter uses HTTPS encryption when performing the conversion process.

To use it, simply specify the .pfx certificate. Select **Standard PEM** for the **Type To Convert To**. Enter the PFX password.



SSL Converter

Use this **SSL Converter to convert SSL certificates** to and from different formats such as **pem, der, p7b, and pfx**. Different platforms and devices require SSL certificates to be converted to different formats. For example, a Windows server exports and imports .pfx files while an Apache server uses individual PEM (.crt, .cer) files. To use the SSL Converter, just select your certificate file and its current type (it will try to detect the type from the file extension) and then select what type you want to convert the certificate to and click **Convert Certificate**. For more information about the different SSL certificate types and how you can convert certificates on your computer using OpenSSL, see below.

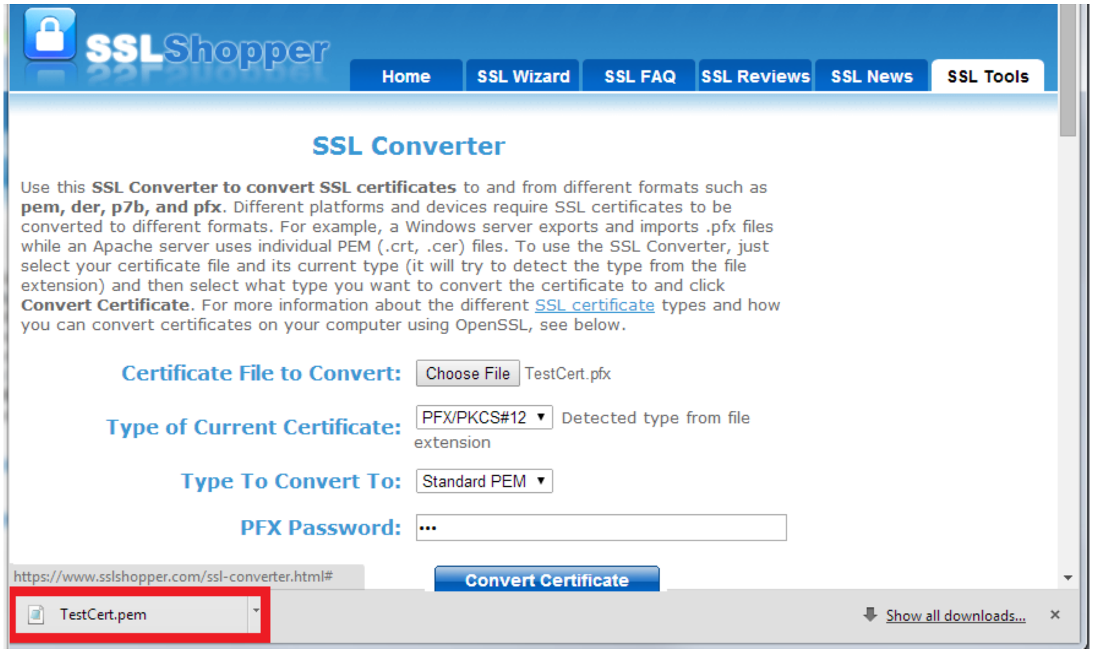
Certificate File to Convert: TestCert.pfx

Type of Current Certificate: PFX/PKCS#12 Detected type from file extension

Type To Convert To: Standard PEM

PFX Password: •••

If the passphrase is correct, the converted **.pem** file should be downloaded successfully.



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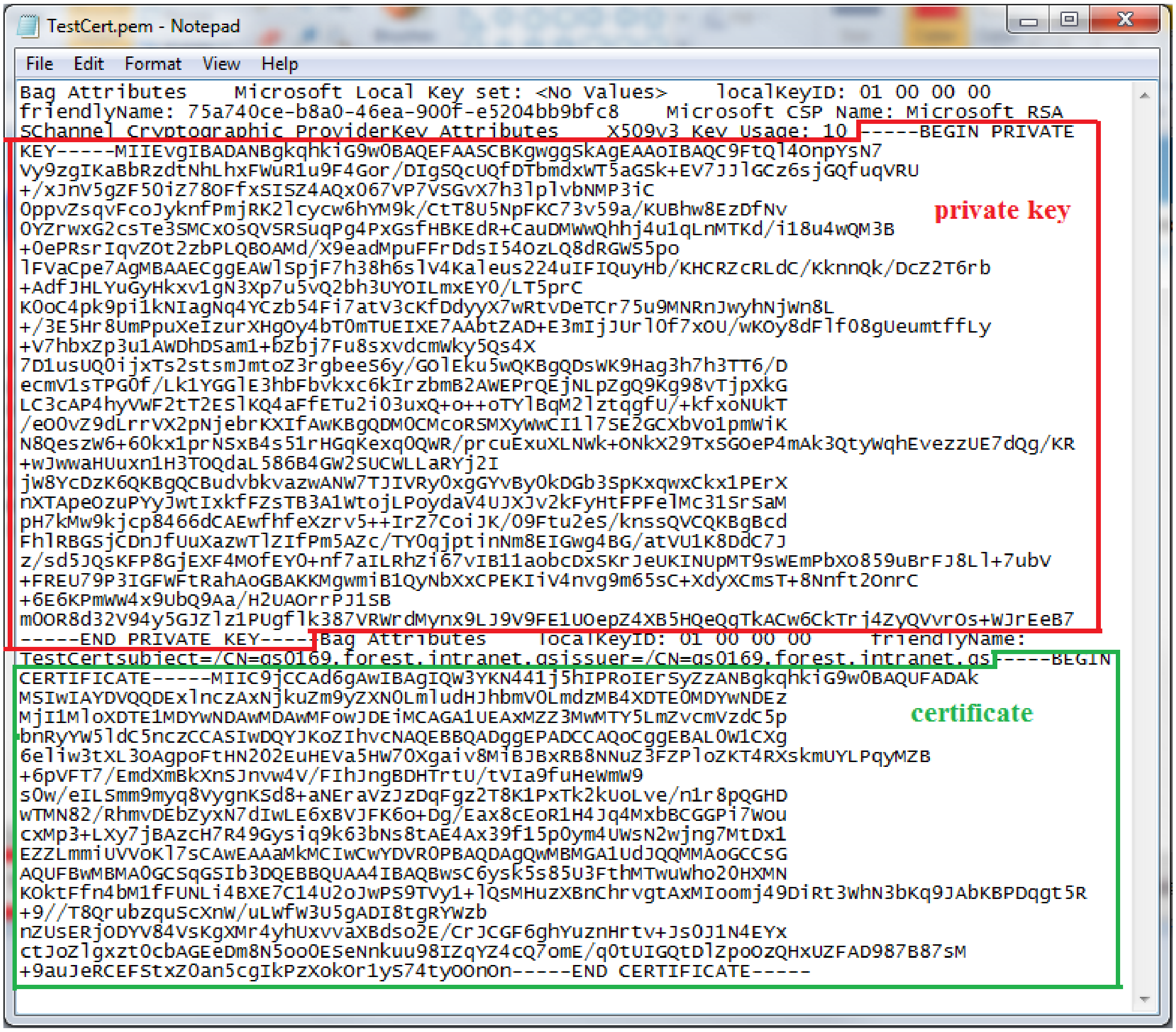
Certificate File to Convert: Choose File TestCert.pfx

Type of Current Certificate: PFX/PKCS#12 ▾ Detected type from file extension

Type To Convert To: Standard PEM ▾

PFX Password: •••

When you open the **.pem** file in **notepad**, you should see the certificate inside. If the private key is bundled inside the **.pfx,** you will also see the private key.



```
Bag Attributes    Microsoft Local Key set: <No Values>    localKeyID: 01 00 00 00
friendlyName: 75a740ce-b8a0-46ea-900f-e5204bb9bfc8    Microsoft CSP Name: Microsoft RSA
SChannel Cryptographic ProviderKey Attributes    X509v3 Key Usage: 10 -----BEGIN PRIVATE
KEY-----MIIEvgIBADANBgkqhkiG9w0BAQEFAASCBKgwggSkAgEAAoIBAQC9FtQl4OnpYsN7
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-----END PRIVATE KEY-----Bag Attributes    localKeyID: 01 00 00 00    friendlyName:
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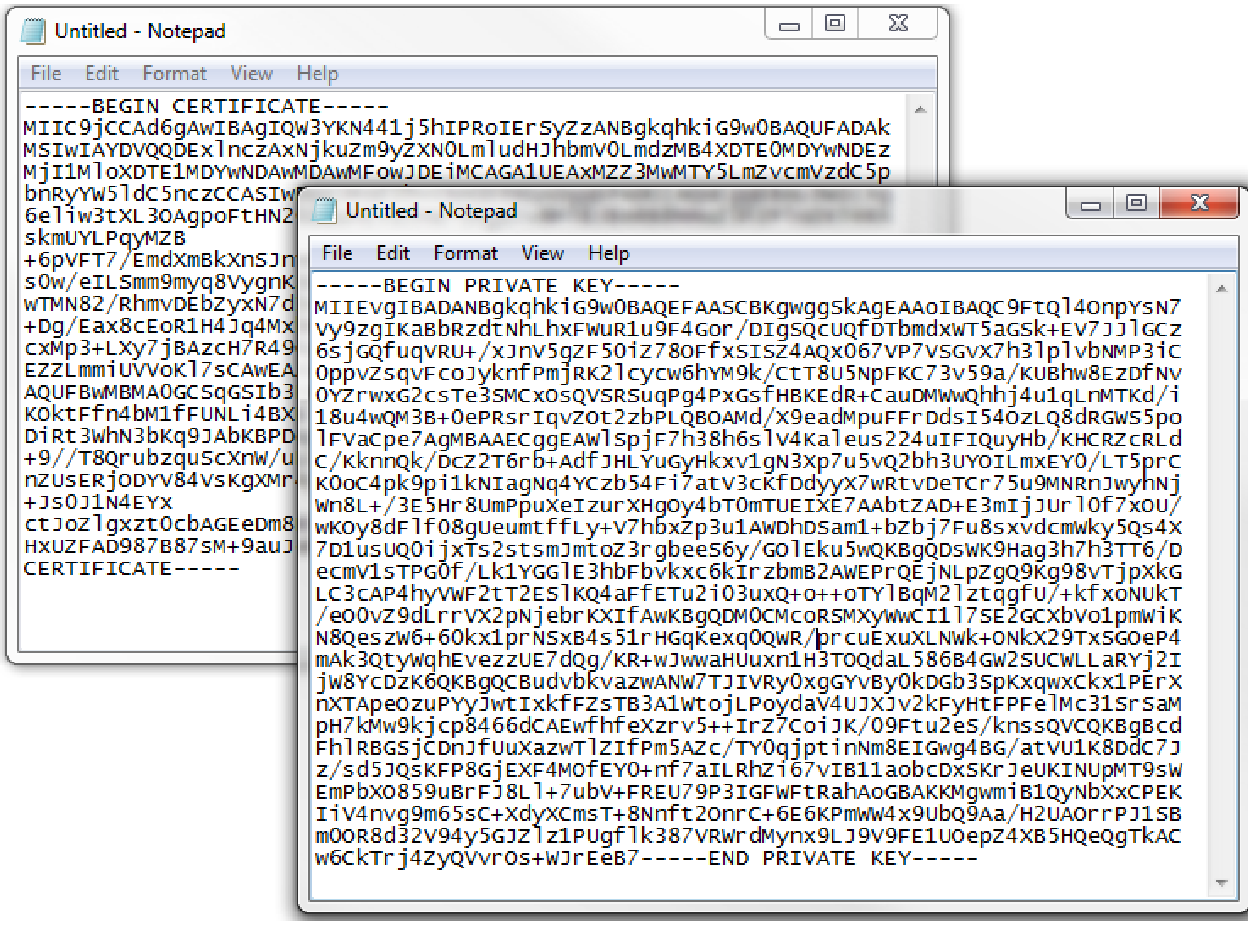
+9auJeRCEFStxZ0an5cgIkPzXokOr1yS74tyOOnOn-----END CERTIFICATE-----
```

Open a blank notepad, then copy/paste from **-----BEGIN PRIVATE KEY-----** to **-----END PRIVATE KEY-----** . Save the file as <**whateverNameYouWant>.key**

Open a blank notepad, then copy/paste from **-----BEGIN CERTIFICATE ----- to -----END CERTIFICATE -----.** Save the file as **<whateverNameYouWant>.crt**



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-----BEGIN CERTIFICATE-----
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CERTIFICATE-----
```

```
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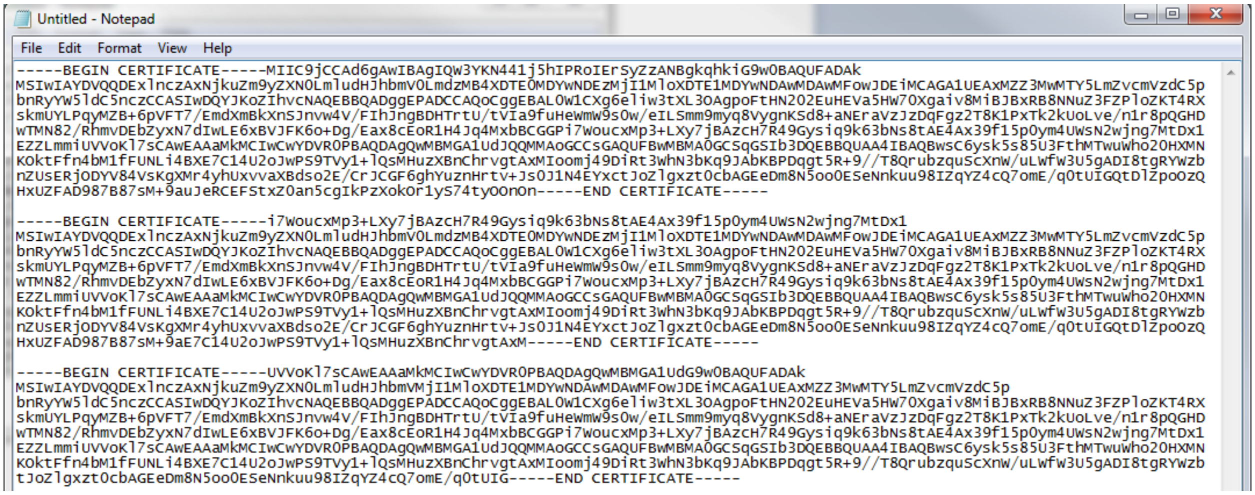
```

NOTE: If the .pfx file contains multiple **-----BEGIN/END CERTIFICATE -----**, copy paste them on top of each other in the order they are in the .pem file and save the file as **Chained<whateverNameYouWant>.crt**. This is now a chained certificate , and can stop here and implement into EFT.



```
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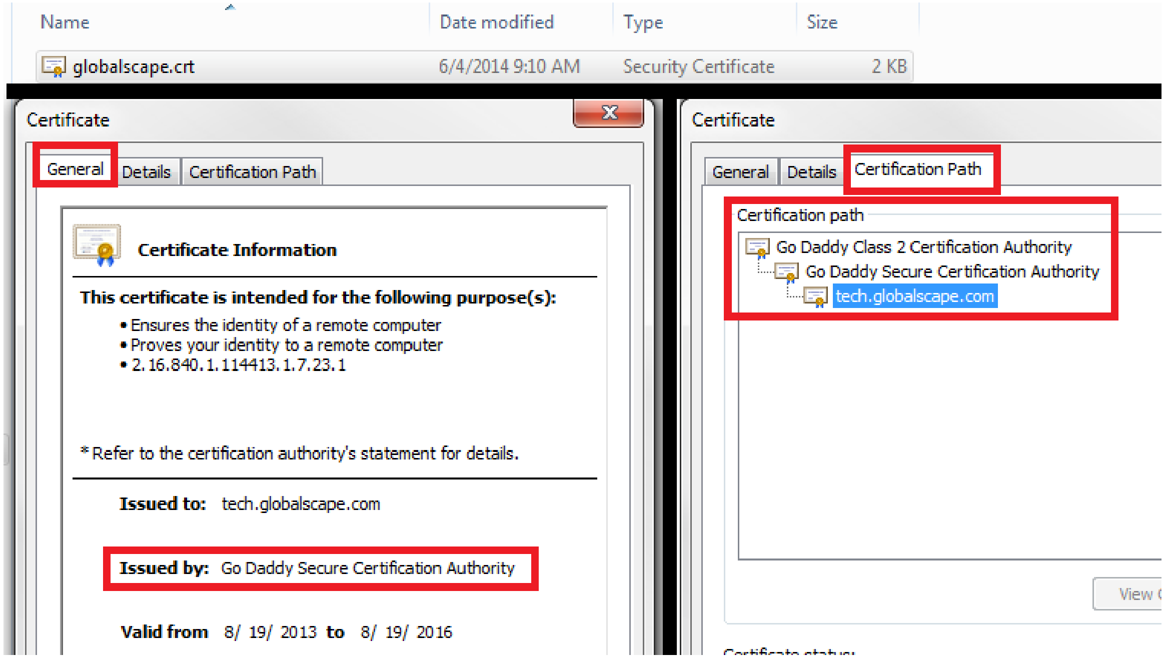
tJoZlgxzt0cbAGEeDm8N5oo0ESeNnkuu98IZqYZ4cQ7omE/q0tUIG-----END CERTIFICATE-----
```

ALTERNATIVELY: If the .pfx file ONLY contains **one -----BEGIN CERTIFICATE -----** to **-----END CERTIFICATE -----** segment…

First verify that the certificate is trusted and signed by a Certificate Authority (CA).

We can see that the below certificate has been signed by a CA.
This is called the "signed certificate".



Name	Date modified	Type	Size
globalscape.crt	6/4/2014 9:10 AM	Security Certificate	2 KB

Certificate Information

This certificate is intended for the following purpose(s):

- Ensures the identity of a remote computer
- Proves your identity to a remote computer
- 2.16.840.1.114413.1.7.23.1

* Refer to the certification authority's statement for details.

Issued to: tech.globalscape.com

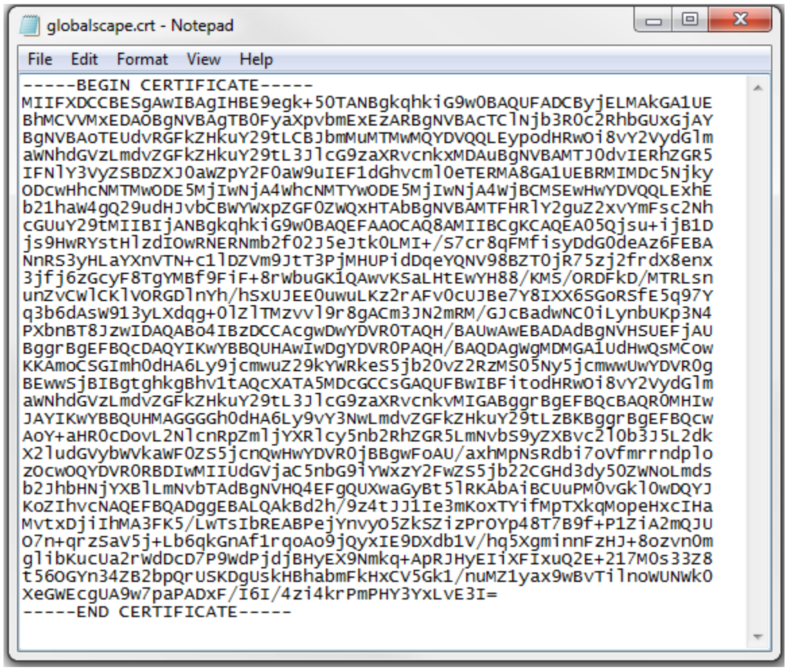
Issued by: Go Daddy Secure Certification Authority

Valid from 8/ 19/ 2013 **to** 8/ 19/ 2016

Certification path

- Go Daddy Class 2 Certification Authority
  - Go Daddy Secure Certification Authority
    - tech.globalscape.com

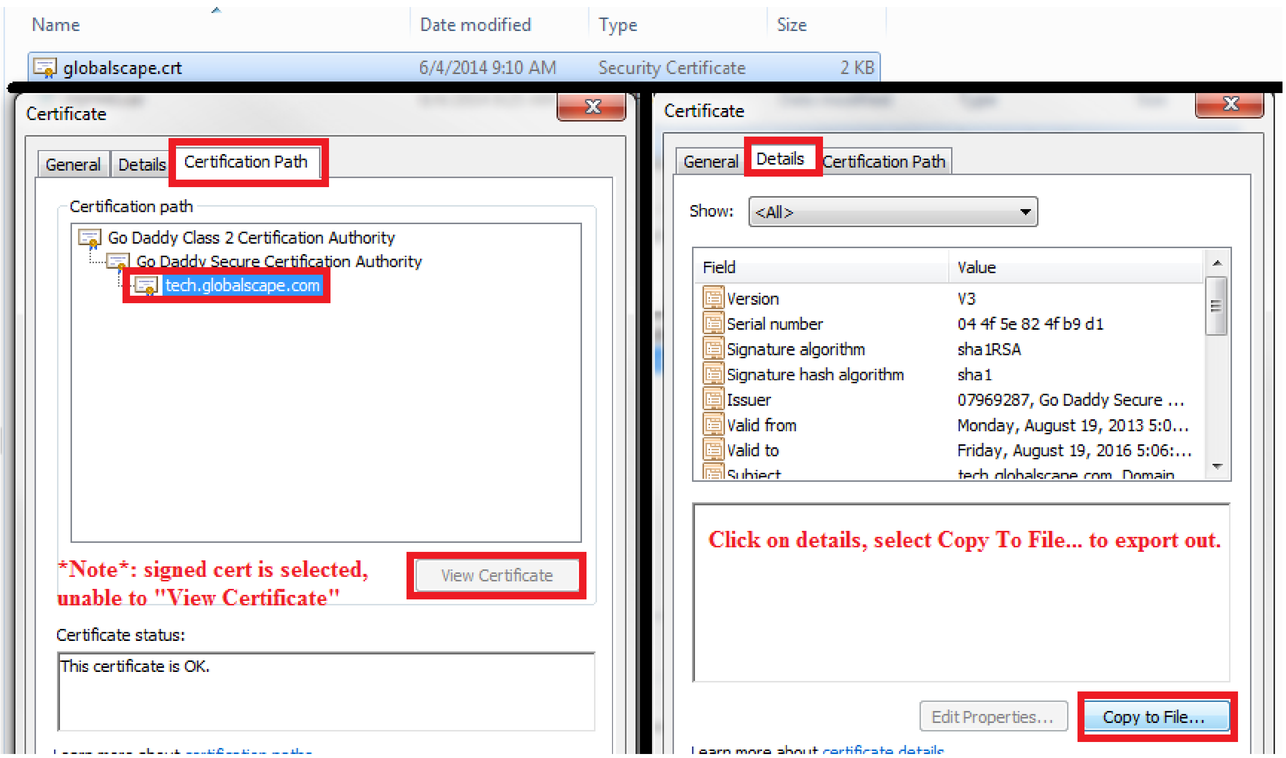
When we open the certificate in notepad, we see that it only has one certificate block.



```
-----BEGIN CERTIFICATE-----
MIIFXDCCBESgAwIBAgIHBE9egk+5OTANBgkqhkiG9w0BAQUFADCByjELMAkGA1UE
BhMCVVMxEDAOBgNVBAgTB0FyaXpvbmExEzARBgNVBAcTClNjb3R0c2RhbGUxGjAY
BgNVBAoTEUdvRGFkZHkuY29tLCBJbmMuMTMwMQYDVQQLEypodHRwOi8vY2VydGlm
aWNhdGVzLmdvZGFkZHkuY29tL3JlcG9zaXRvcnkxMDAuBgNVBAMTJ0dvIERhZGR5
IFNlY3VyZSBDZXJ0aWZpY2F0aW9uIEF1dGhvcml0eTERMA8GA1UEBRMIMDc5Njky
ODcwHhcNMTMwODE5MjIwNjA4WhcNMTYwODE5MjIwNjA4WjBCMSEwHwYDVQQLExhE
b21haW4gQ29udHJvbCBWYWxpZGF0ZWQxHTAbBgNVBAMTFHRlY2guZ2xvYmFsc2Nh
cGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA05Qjsu+ijB1D
js9HwRYstHlzdIOwRNERNmb2f02J5eJtk0LMI+/S7cr8qFMfisyDdG0deAz6FEBA
NnRS3yHLaYXnVTN+c1lDZVm9JtT3PjMHUPidDqeYQNV98BZT0jR75zj2frdX8enx
3jfj6zGcyF8TgYMBf9FiF+8rWbuGK1QAwvKSaLHtEwYH88/KMS/ORDFkD/MTRLsn
unZvCWlCKlVORGDlnYh/hSxUJEE0uwuLKz2rAFv0cUJBe7Y8IXX6SGoRSfE5q97Y
q3b6dAsW913yLXdqg+0lZlTMzvvl9r8gACm3JN2mRM/GJcBadwNC0iLynbUKp3N4
PXbnBT8JzwIDAQABo4IBzDCCAcgwDwYDVR0TAQH/BAUwAwEBADAdBgNVHSUEFjAU
BggrBgEFBQcDAQYIKwYBBQUHAwIwDgYDVR0PAQH/BAQDAgWgMDMGA1UdHwQsMCow
KKAmoCSGImh0dHA6Ly9jcmwuZ29kYWRkeS5jb20vZ2RzMS05Ny5jcmwwUwYDVR0g
BEwwSjBIBgtghkgBhv1tAQcXATA5MDcGCCsGAQUFBwIBFitodHRwOi8vY2VydGlm
aWNhdGVzLmdvZGFkZHkuY29tL3JlcG9zaXRvcnkvMIGABggrBgEFBQcBAQR0MHIw
JAYIKwYBBQUHMAGGGGh0dHA6Ly9vY3NwLmdvZGFkZHkuY29tLzBKBggrBgEFBQcw
AoY+aHR0cDovL2NlcnRpZmljYXRlcy5nb2RhZGR5LmNvbS9yZXBvc2l0b3J5L2dk
X2ludGVybWVkaWF0ZS5jcnQwHwYDVR0jBBgwFoAU/axhMpNsRdbi7oVfmrrndplo
zOcwOQYDVR0RBDIwMIIUdGVjaC5nbG9iYWxzY2FwZS5jb22CGHd3dy50ZWNoLmds
b2JhbHNjYXBlLmNvbTAdBgNVHQ4EFgQUXwaGyBt5lRKAbAiBCUuPM0vGkl0wDQYJ
KoZIhvcNAQEFBQADggEBALQAkBd2h/9z4tJJ1Ie3mKoxTYifMpTXkqMopeHxcIHa
MvtxDjiIhMA3FK5/LwTsIbREABPejYnvyO5ZkSZizPrOYp48T7B9f+P1ZiA2mQJU
O7n+qrzSaV5j+Lb6qkGnAf1rqoAo9jQyxIE9DXdb1V/hq5XgminnFzHJ+8ozvn0m
glibKucUa2rWdDcD7P9WdPjdjBHyEX9Nmkq+ApRJHyEIiXFIxuQ2E+217M0s33Z8
t56OGYn34ZB2bpQrUSKDgUskHBhabmFkHxCV5Gk1/nuMZ1yax9wBvTilnoWUNWk0
XeGWEcgUA9w7paPADxF/I6I/4zi4krPmPHY3YxLvE3I=
-----END CERTIFICATE-----
```

We will have to export out the individual certificates of the chain so that we can merge them into one file.

To do this, double click on the **signed cert**. Navigate to the **Details** tab and select **Copy To File…**



Name	Date modified	Type	Size
globalscape.crt	6/4/2014 9:10 AM	Security Certificate	2 KB

Note: signed cert is selected, unable to "View Certificate"

Certificate status:

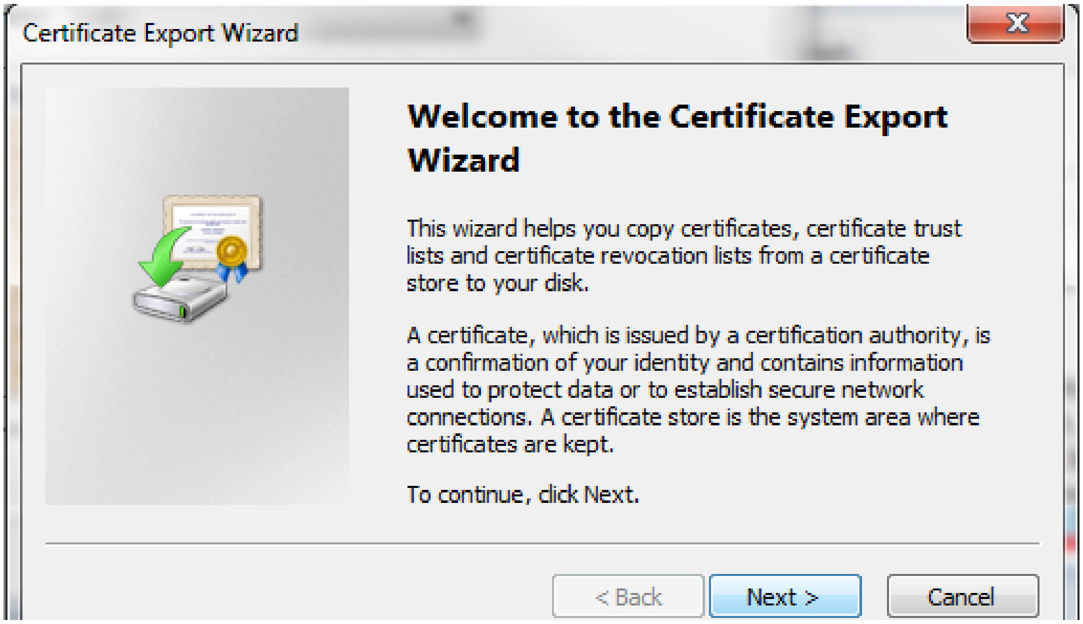
This certificate is OK.

Show: <All>

Field	Value
Version	V3
Serial number	04 4f 5e 82 4f b9 d1
Signature algorithm	sha1RSA
Signature hash algorithm	sha1
Issuer	07969287, Go Daddy Secure ...
Valid from	Monday, August 19, 2013 5:0...
Valid to	Friday, August 19, 2016 5:06:...
Subject	tech.globalscape.com, Domain...

Click on details, select Copy To File... to export out.

You will now be presented with the Certificate Export Wizard:



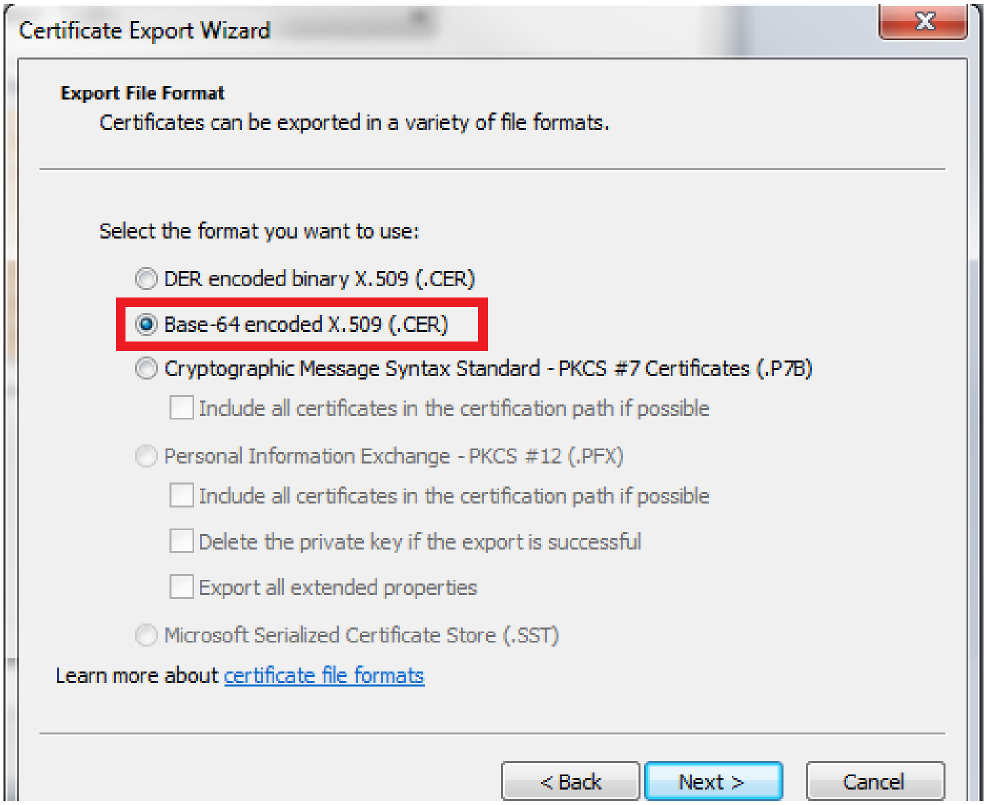
Welcome to the Certificate Export Wizard

This wizard helps you copy certificates, certificate trust lists and certificate revocation lists from a certificate store to your disk.

A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.

To continue, click Next.

Select the option to export as **Base-64 encoded X.509 (.CER)**:



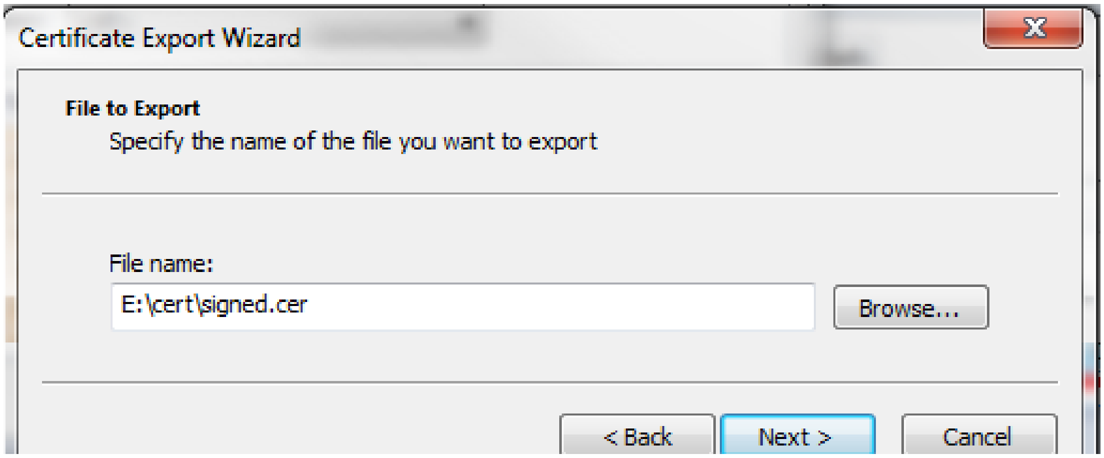
Export File Format
Certificates can be exported in a variety of file formats.

Select the format you want to use:

- ○ DER encoded binary X.509 (.CER)
- ● Base-64 encoded X.509 (.CER)
- ○ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
  - □ Include all certificates in the certification path if possible
- ○ Personal Information Exchange - PKCS #12 (.PFX)
  - □ Include all certificates in the certification path if possible
  - □ Delete the private key if the export is successful
  - □ Export all extended properties
- ○ Microsoft Serialized Certificate Store (.SST)

Learn more about certificate file formats

Specify a name for the certificate. It is a good idea to label them based on their certificate level so that it will be easier to pick them out when merging them. In this example, I'll name the certificate **signed.cer**, because it is the signed certificate.



Certificate Export Wizard

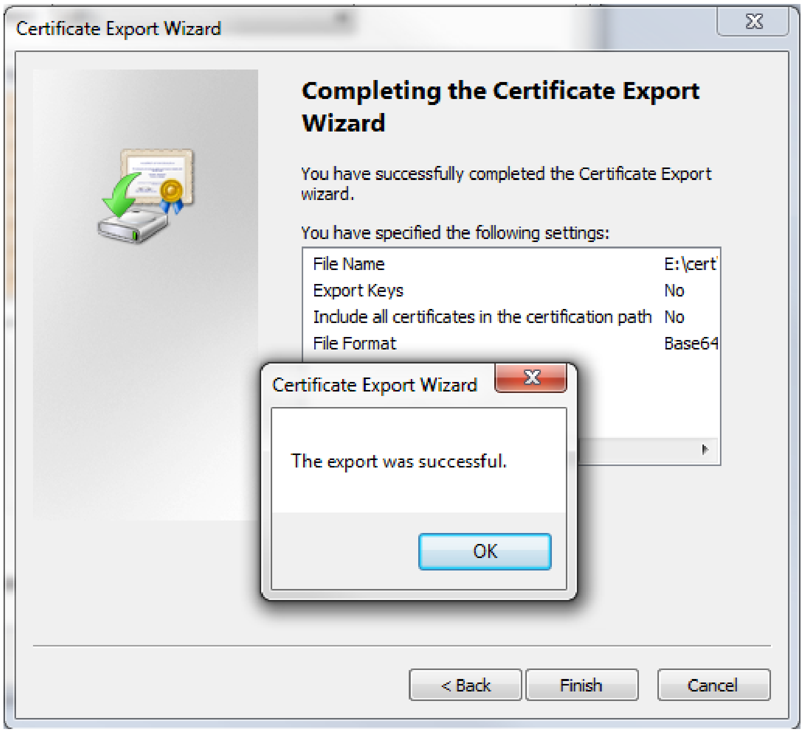
File to Export

Specify the name of the file you want to export

File name:

E:\cert\signed.cer

The signed certificate should now be exported:



Certificate Export Wizard

Completing the Certificate Export Wizard

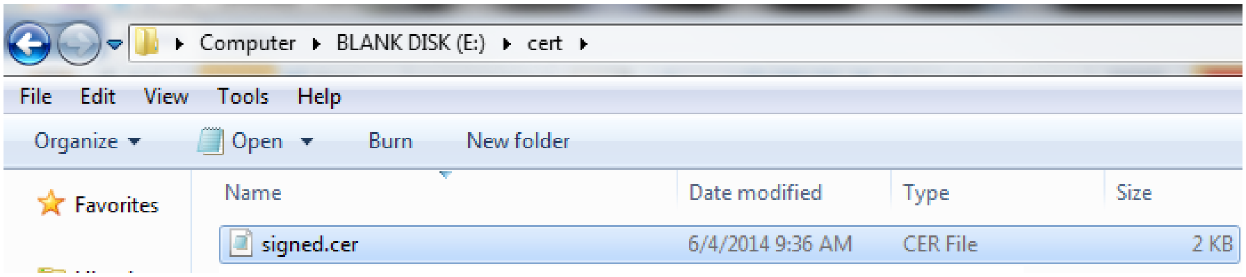
You have successfully completed the Certificate Export wizard.

You have specified the following settings:

File Name	E:\cert
Export Keys	No
Include all certificates in the certification path	No
File Format	Base64

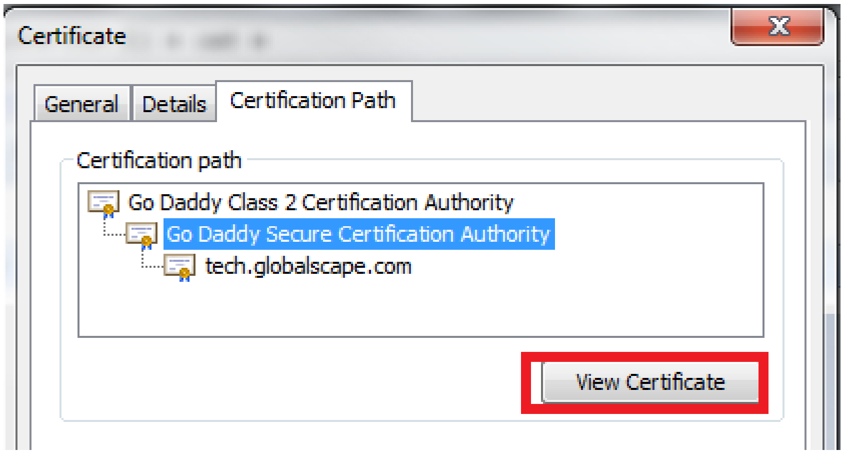
Certificate Export Wizard

The export was successful.


Computer ▸ BLANK DISK (E:) ▸ cert ▸
File Edit View Tools Help
Organize ▾
Open ▾
Burn
New folder
Favorites

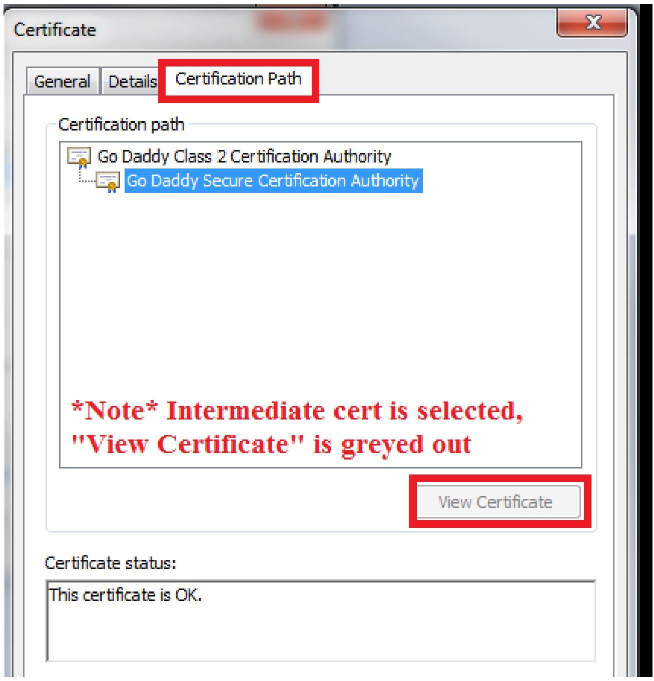
Name	Date modified	Type	Size
signed.cer	6/4/2014 9:36 AM	CER File	2 KB

Next, click on the **Intermediate** certificate (there are generally 1-3 of them), and select **View Certificate:**



Go Daddy Class 2 Certification Authority
Go Daddy Secure Certification Authority
tech.globalscape.com

The intermediate certificate should now be selected.
Navigate to the **Details** tab and select **Copy To File…**



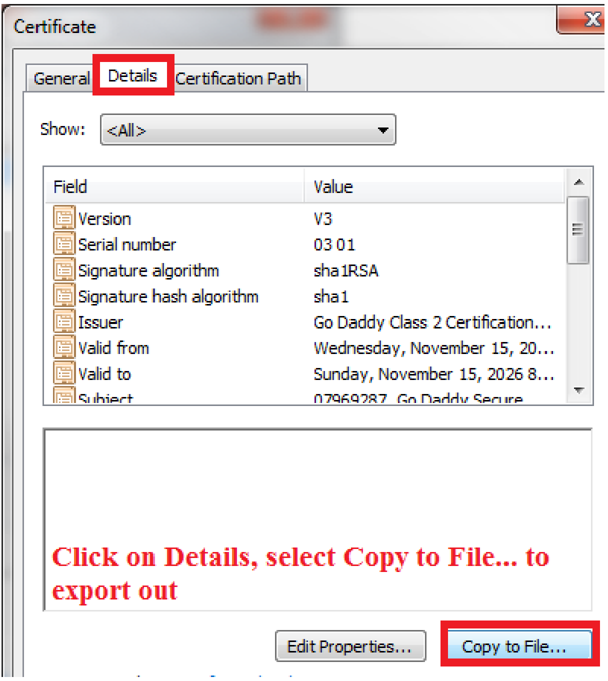
Certification path

Go Daddy Class 2 Certification Authority
Go Daddy Secure Certification Authority

Note Intermediate cert is selected, "View Certificate" is greyed out

Certificate status:

This certificate is OK.

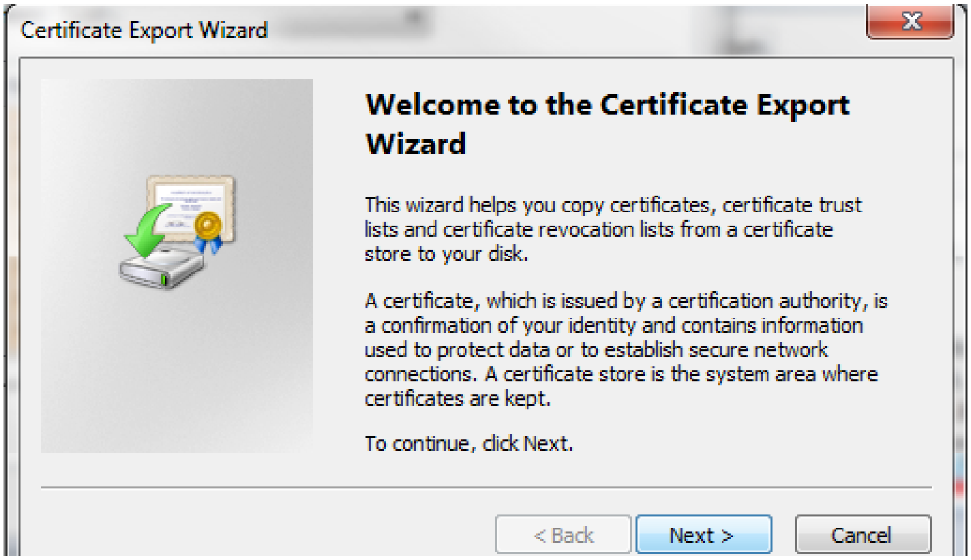


Show: <All>

Field	Value
Version	V3
Serial number	03 01
Signature algorithm	sha1RSA
Signature hash algorithm	sha1
Issuer	Go Daddy Class 2 Certification...
Valid from	Wednesday, November 15, 20...
Valid to	Sunday, November 15, 2026 8...
Subject	07969287, Go Daddy Secure

Click on Details, select Copy to File... to export out

You will now be presented with the Certificate Export Wizard:



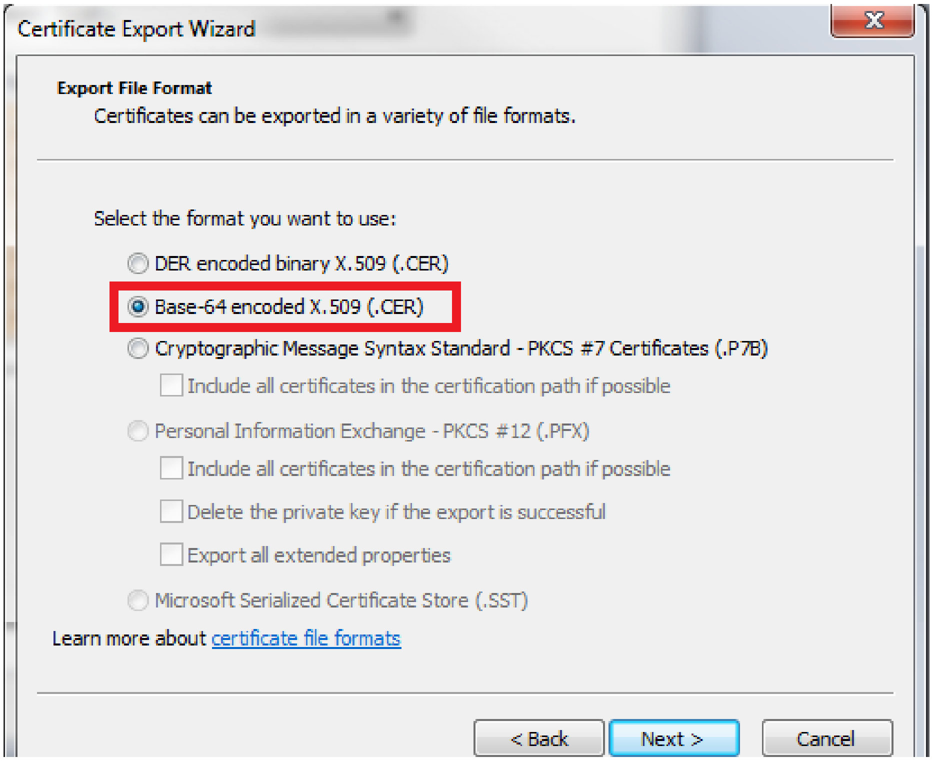
Welcome to the Certificate Export Wizard

This wizard helps you copy certificates, certificate trust lists and certificate revocation lists from a certificate store to your disk.

A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.

To continue, click Next.

Select the option to export as **Base-64 encoded X.509 (.CER)**:



Certificate Export Wizard

Export File Format
Certificates can be exported in a variety of file formats.

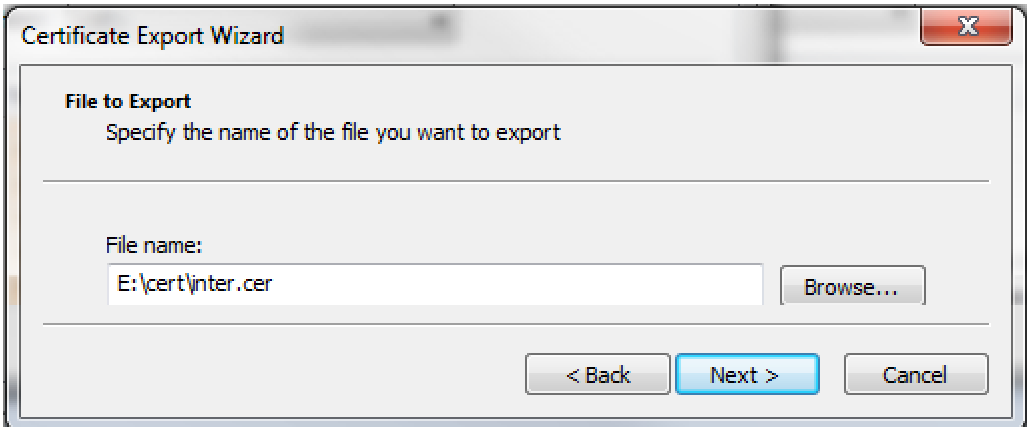
Select the format you want to use:

○ DER encoded binary X.509 (.CER)
● Base-64 encoded X.509 (.CER)
○ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
□ Include all certificates in the certification path if possible
○ Personal Information Exchange - PKCS #12 (.PFX)
□ Include all certificates in the certification path if possible
□ Delete the private key if the export is successful
□ Export all extended properties
○ Microsoft Serialized Certificate Store (.SST)

Learn more about certificate file formats

Similar to before, it's a good idea to name the certificates based on the certificate level so that it will be easier to pick them out when merging them. In this example, I'll name the certificate **inter.cer**, because it is the intermediate certificate.

If this certificate had multiple intermediate certs, I would call this **inter1.cer**.

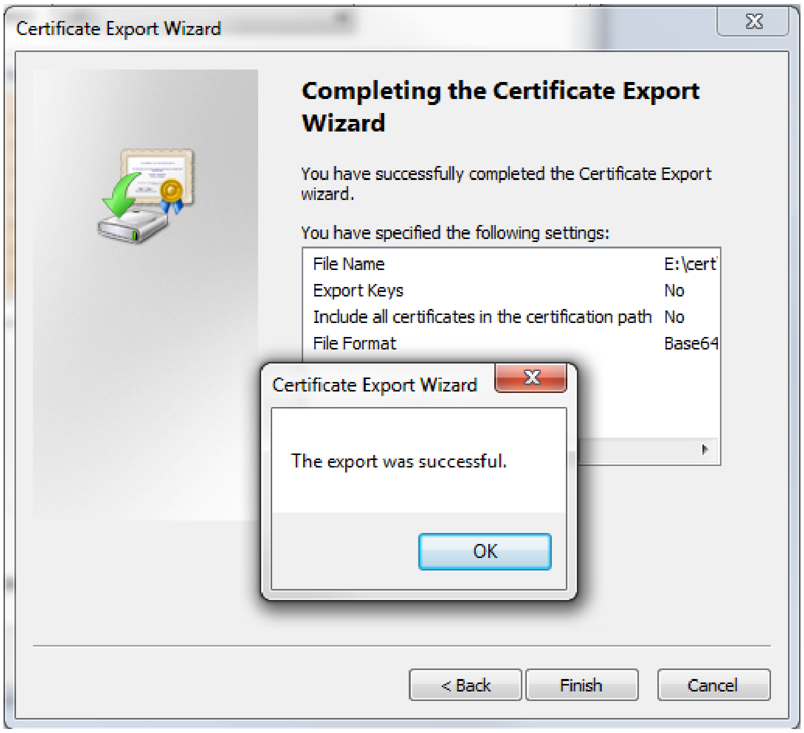


Certificate Export Wizard

File to Export
Specify the name of the file you want to export

File name:
E:\cert\inter.cer

The intermediate certificate should now be exported (if there are multiple intermediate certificates in the chain, this will be done for each certificate):



Completing the Certificate Export Wizard

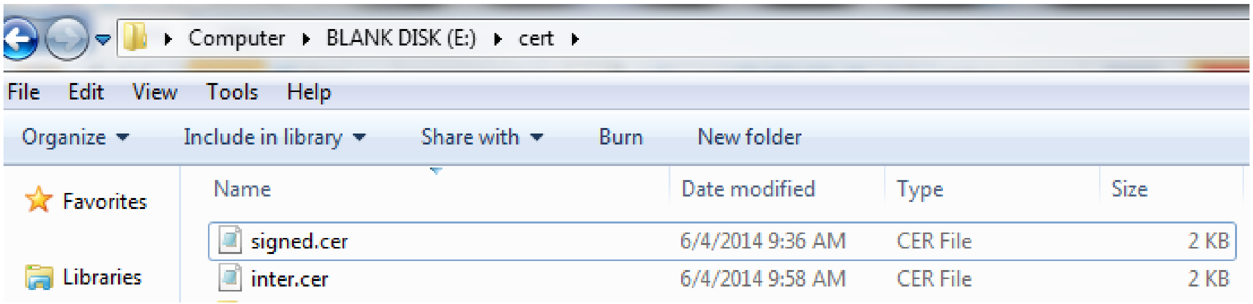
You have successfully completed the Certificate Export wizard.

You have specified the following settings:

File Name	E:\cert
Export Keys	No
Include all certificates in the certification path	No
File Format	Base64

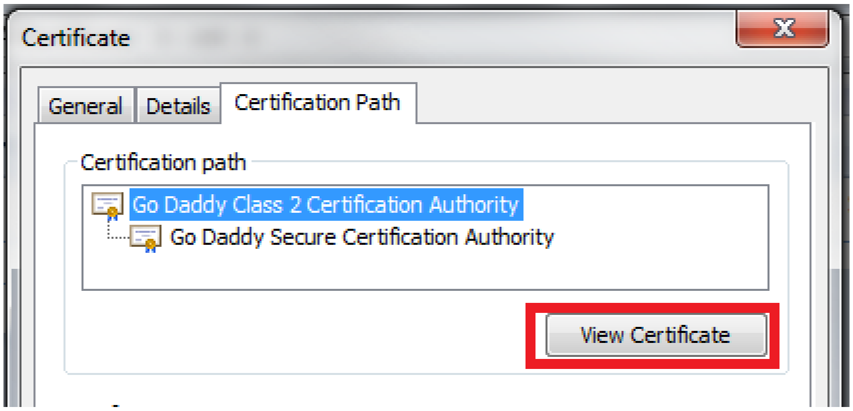
Certificate Export Wizard

The export was successful.

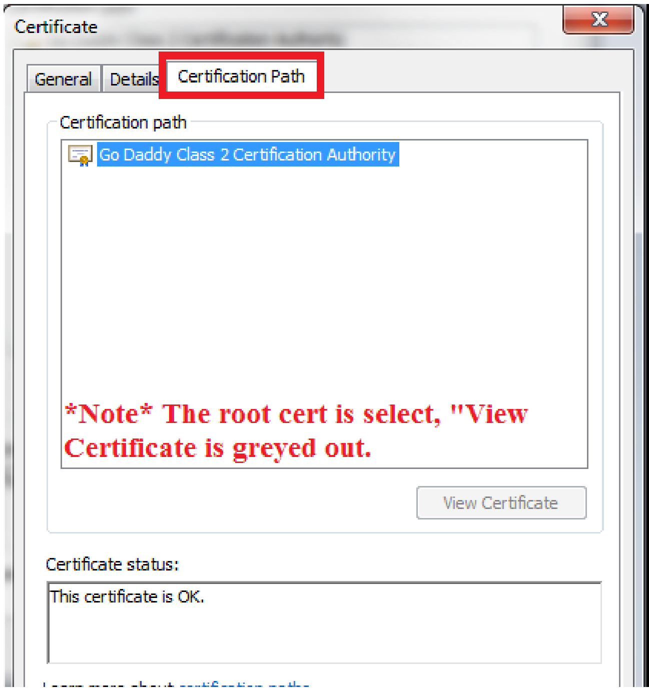


Name	Date modified	Type	Size
signed.cer	6/4/2014 9:36 AM	CER File	2 KB
inter.cer	6/4/2014 9:58 AM	CER File	2 KB

Finally, select the root certificate and press **View Certificate**


Certificate
General
Details
Certification Path
Certification path
Go Daddy Class 2 Certification Authority
Go Daddy Secure Certification Authority
View Certificate

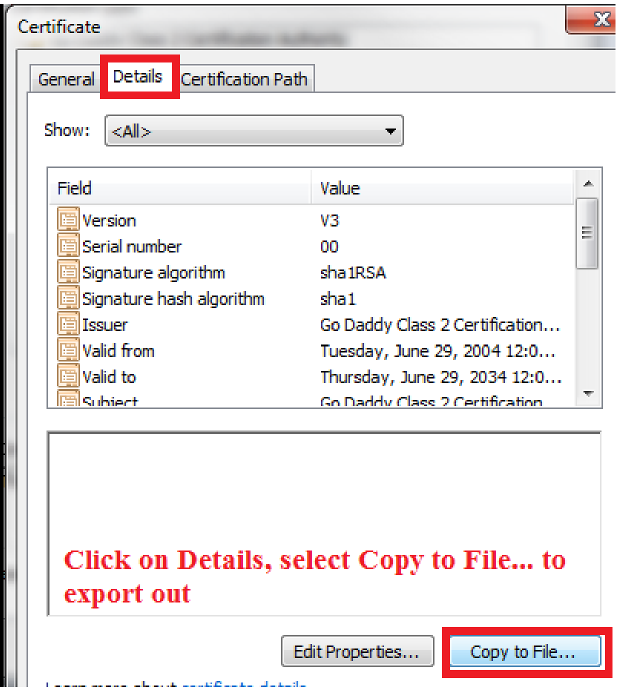
The root certificate should now be selected.
Navigate to the **Details** tab and select **Copy to File…**



Note The root cert is select, "View Certificate is greyed out.

Certificate status:

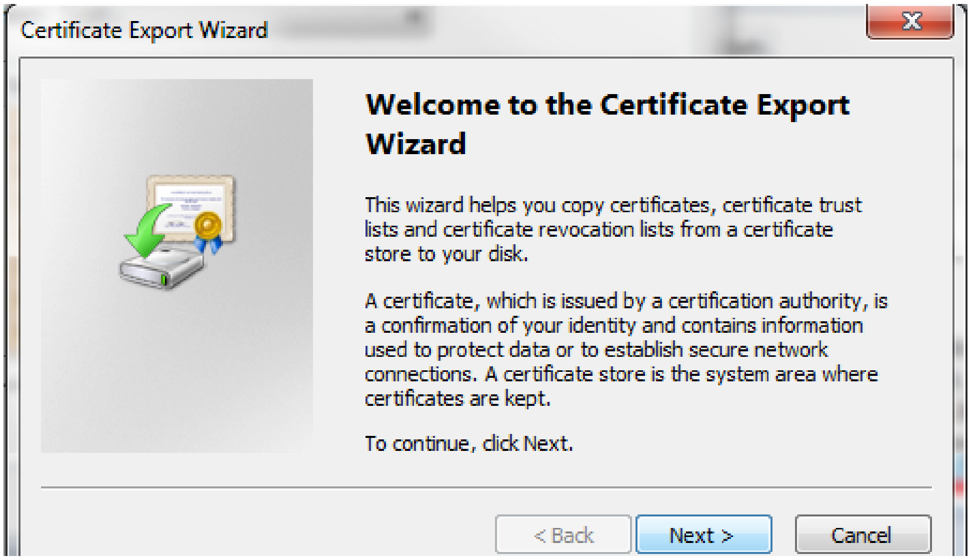
This certificate is OK.



Field	Value
Version	V3
Serial number	00
Signature algorithm	sha1RSA
Signature hash algorithm	sha1
Issuer	Go Daddy Class 2 Certification...
Valid from	Tuesday, June 29, 2004 12:0...
Valid to	Thursday, June 29, 2034 12:0...
Subject	Go Daddy Class 2 Certification

Click on Details, select Copy to File... to export out

You will now be presented with the Certificate Export Wizard:



Certificate Export Wizard

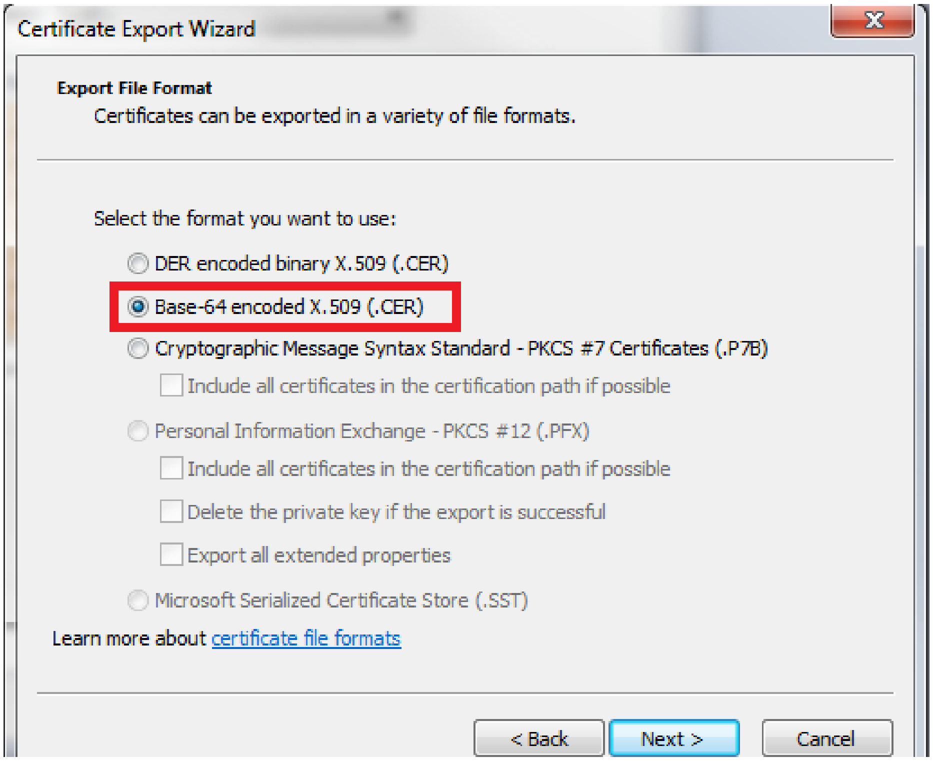
Welcome to the Certificate Export Wizard

This wizard helps you copy certificates, certificate trust lists and certificate revocation lists from a certificate store to your disk.

A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.

To continue, click Next.

Select the option to export as **Base-64 encoded X.509 (.CER)**:



Certificate Export Wizard

Export File Format

Certificates can be exported in a variety of file formats.

Select the format you want to use:

○ DER encoded binary X.509 (.CER)

● Base-64 encoded X.509 (.CER)

○ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)

□ Include all certificates in the certification path if possible

○ Personal Information Exchange - PKCS #12 (.PFX)

□ Include all certificates in the certification path if possible

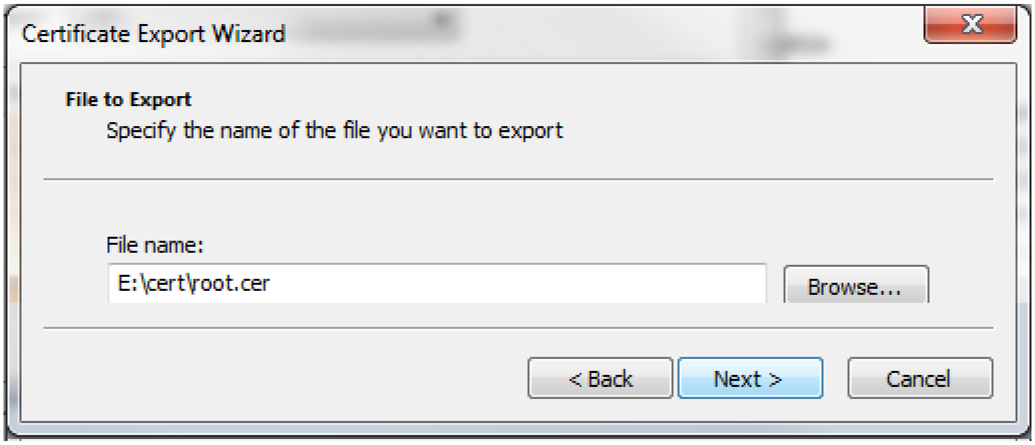
□ Delete the private key if the export is successful

□ Export all extended properties

○ Microsoft Serialized Certificate Store (.SST)

Learn more about certificate file formats

The cert is being named **root.cer**, because it is the root certificate.



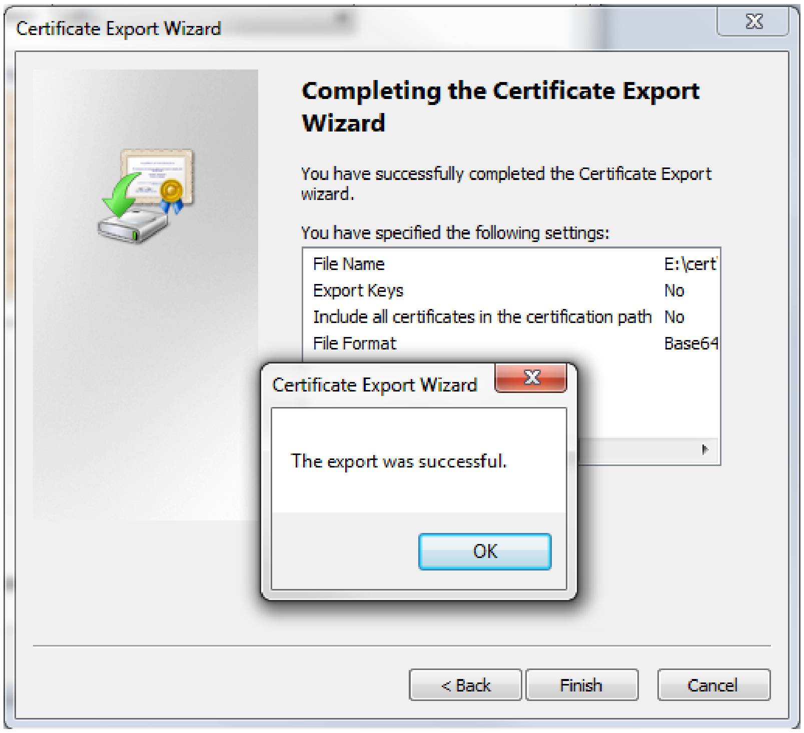
Certificate Export Wizard

File to Export

Specify the name of the file you want to export

File name: E:\cert\root.cer

The root certificate should now be exported:



Completing the Certificate Export Wizard

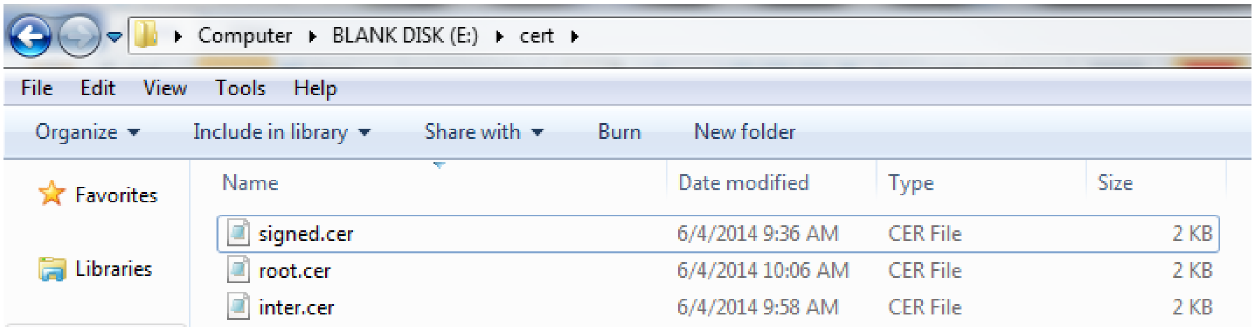
You have successfully completed the Certificate Export wizard.

You have specified the following settings:

File Name	E:\cert
Export Keys	No
Include all certificates in the certification path	No
File Format	Base64

Certificate Export Wizard

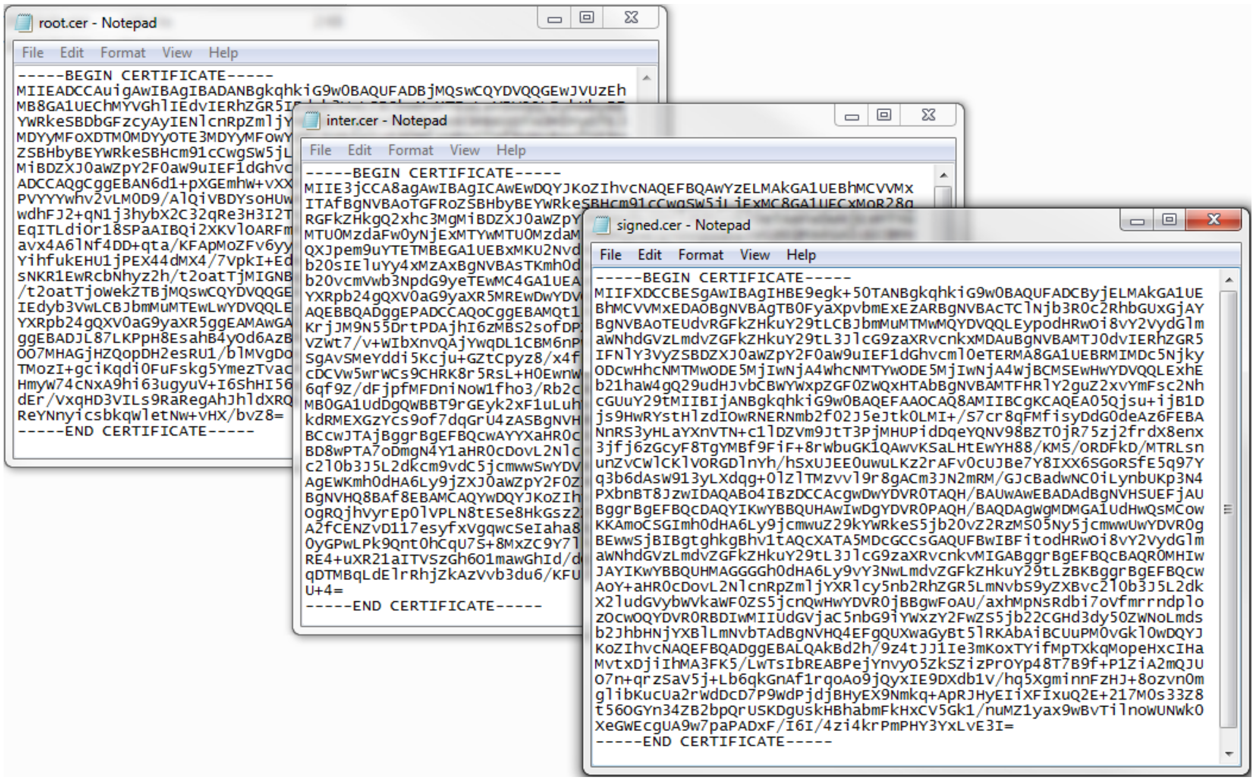
The export was successful.


Computer ▸ BLANK DISK (E:) ▸ cert ▸
File Edit View Tools Help
Organize ▾ Include in library ▾ Share with ▾ Burn New folder
Favorites
Libraries

Name	Date modified	Type	Size
signed.cer	6/4/2014 9:36 AM	CER File	2 KB
root.cer	6/4/2014 10:06 AM	CER File	2 KB
inter.cer	6/4/2014 9:58 AM	CER File	2 KB

Now that we have all of the certificates in the certificate path outputted, we can chain them together into one file.

First, open each file in notepad


root.cer - Notepad
File Edit Format View Help
inter.cer - Notepad
File Edit Format View Help
signed.cer - Notepad
File Edit Format View Help

```
-----BEGIN CERTIFICATE-----
MIIEADCCAuigAwIBAgIBADANBgkqhkiG9w0BAQUFADBjMQswCQYDVQQGEwJVUzEh
MB8GA1UEChMYVGhlIEdvIERhZGR5IE
YWRkeSBDbGFzcyAyIENlcnRpZmljY
MDYyMFoXDTM0MDYyOTE3MDYyMFowY
ZSBHbyBEYWRkeSBHcm91cCwgSW5jL
MiBDZXJ0aWZpY2F0aW9uIEF1dGhvc
ADCCAQgCggEBAN6d1+pXGEmhW+vXX
PVYYYwhv2vLM0D9/AlQiVBDYsoHUw
wdhFJ2+qN1j3hybX2C32qRe3H3I2T
EqITLdiOr18SPaAIBQi2XKVlOARFm
avx4A6lNf4DD+qta/KFApMoZFv6yy
YihfukEHU1jPEX44dMX4/7VpkI+Ed
sNKR1EwRcbNhyz2h/t2oatTjMIGNB
/t2oatTjoWekZTBjMQswCQYDVQQGE
IEdyb3VwLCBJbmMuMTEwLwYDVQQLE
YXRpb24gQXV0aG9yaXR5ggEAMAwGA
ggEBADJL87LKPpH8EsahB4yOd6AzB
OO7MHAGjHZQopDH2esRU1/blMVgDo
TMozI+gciKqdiOFuFskg5YmezTvac
HmyW74cNxA9hi63ugyuV+I6ShHI56
dEr/VxqHD3VILs9RaRegAhJhldXRQ
ReYNnyicsbkqWletNw+vHX/bvZ8=
-----END CERTIFICATE-----
```

```
-----BEGIN CERTIFICATE-----
MIIE3jCCA8agAwIBAgICAwEwDQYJKoZIhvcNAQEFBQAwYzELMAkGA1UEBhMCVVMx
ITAfBgNVBAoTGFRoZSBHbyBEYWRkeSBHcm91cCwgSW5jLjExMC8GA1UECxMoR28g
RGFkZHkgQ2xhc3MgMiBDZXJ0aWZpY
MTU0MzdaFw0yNjExMTYwMTU0MzdaM
QXJpem9uYTETMBEGA1UEBxMKU2Nvd
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b20vcmVwb3NpdG9yeTEwMC4GA1UEA
YXRpb24gQXV0aG9yaXR5MREwDwYDV
AQEBBQADggEPADCCAQoCggEBAMQt1
KrjJM9N55DrtPDAjhI6zMBS2sofDP
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SgAvSMeYddi5Kcju+GZtCpyz8/x4f
cDCVw5wrWCs9CHRK8r5RsL+H0EwnW
6qf9Z/dFjpfMFDniNoW1fho3/Rb2c
MB0GA1UdDgQWBBT9rGEyk2xF1uLuh
kdRMEXGzYcs9of7dqGrU4zASBgNVH
BCcwJTAjBggrBgEFBQcwAYYXaHR0c
BD8wPTA7oDmgN4Y1aHR0cDovL2Nlc
c2l0b3J5L2dkcm9vdC5jcmwwSwYDV
AgEWKmh0dHA6Ly9jZXJ0aWZpY2F0Z
BgNVHQ8BAf8EBAMCAQYwDQYJKoZIh
OgRQjhVyrEp0lVPLN8tESe8HkGsz2
A2fCENZvD117esyfxVgqwcSeIaha8
OyGPwLPk9Qnt0hCqU7S+8MxZC9Y7l
RE4+uXR21aITVSzGh6O1mawGhId/d
qDTMBqLdElrRhjZkAzVvb3du6/KFU
U+4=
-----END CERTIFICATE-----
```

```
-----BEGIN CERTIFICATE-----
MIIFXDCCBESgAwIBAgIHBE9egk+5OTANBgkqhkiG9w0BAQUFADCByjELMAkGA1UE
BhMCVVMxEDAOBgNVBAgTB0FyaXpvbmExEzARBgNVBAcTClNjb3R0c2RhbGUxGjAY
BgNVBAoTEUdvRGFkZHkuY29tLCBJbmMuMTMwMQYDVQQLEypodHRwOi8vY2VydGlm
aWNhdGVzLmdvZGFkZHkuY29tL3JlcG9zaXRvcnkxMDAuBgNVBAMTJ0dvIERhZGR5
IFNlY3VyZSBDZXJ0aWZpY2F0aW9uIEF1dGhvcml0eTERMA8GA1UEBRMIMDc5Njky
ODcwHhcNMTMwODE5MjIwNjA4WhcNMTYwODE5MjIwNjA4WjBCMSEwHwYDVQQLExhE
b21haW4gQ29udHJvbCBWYWxpZGF0ZWQxHTAbBgNVBAMTFHRlY2guZ2xvYmFsc2Nh
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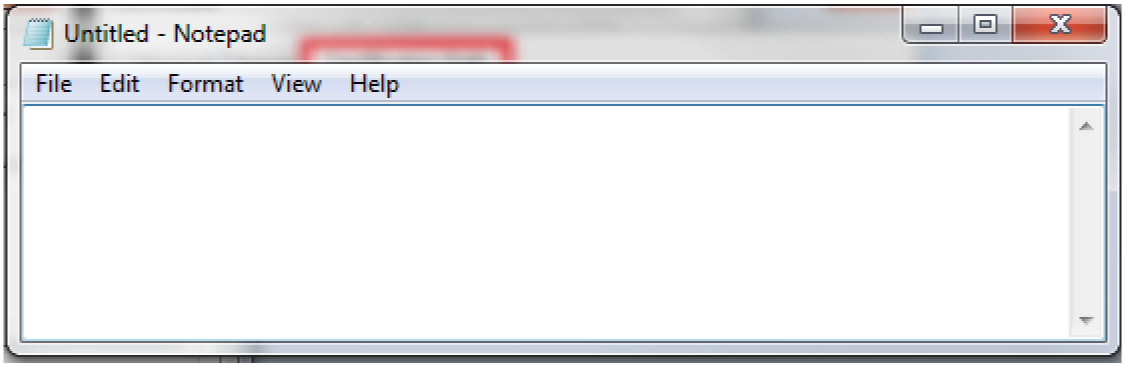
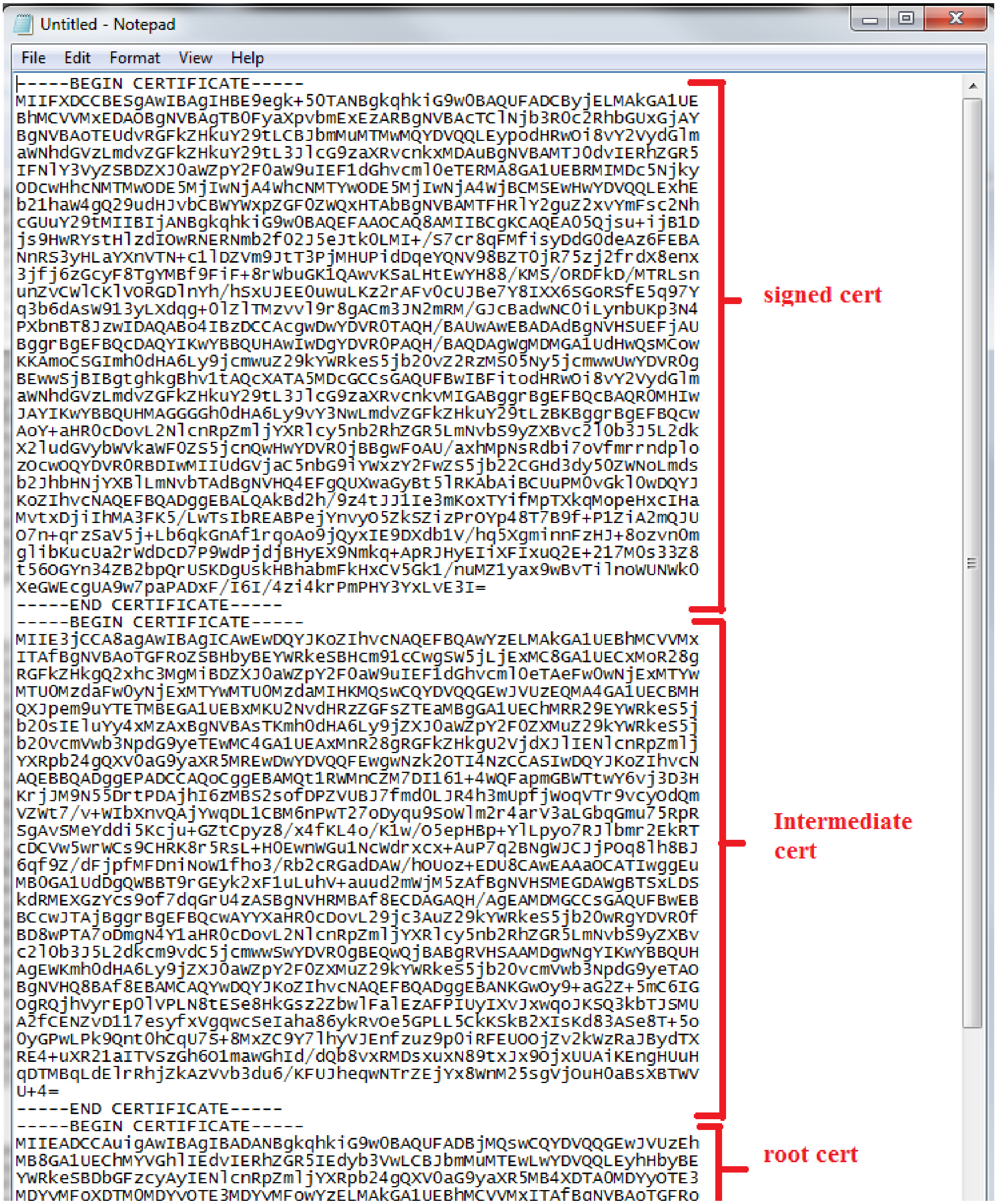
-----END CERTIFICATE-----
```

Then, open a blank notepad.



Copy/paste the exported certs in order (from top to bottom)

1) Signed (at the top)
2) Intermediate (s) [if you have multiple, paste them in order]
3) Root (at the bottom)



```
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-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
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U+4=
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
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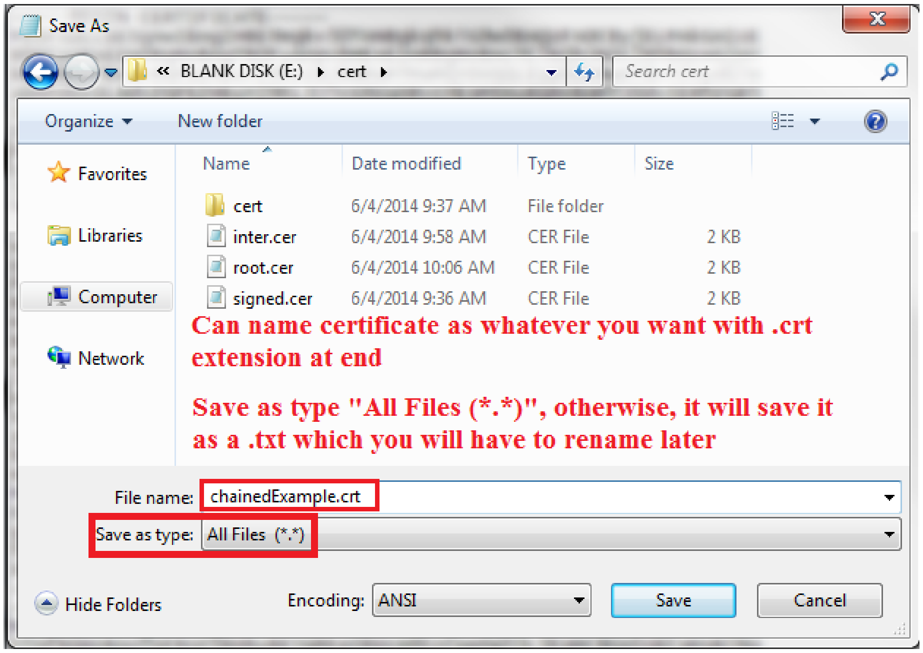
```

Save the file with a **.crt** extension



Name	Date modified	Type	Size
cert	6/4/2014 9:37 AM	File folder	
inter.cer	6/4/2014 9:58 AM	CER File	2 KB
root.cer	6/4/2014 10:06 AM	CER File	2 KB
signed.cer	6/4/2014 9:36 AM	CER File	2 KB

Can name certificate as whatever you want with .crt extension at end

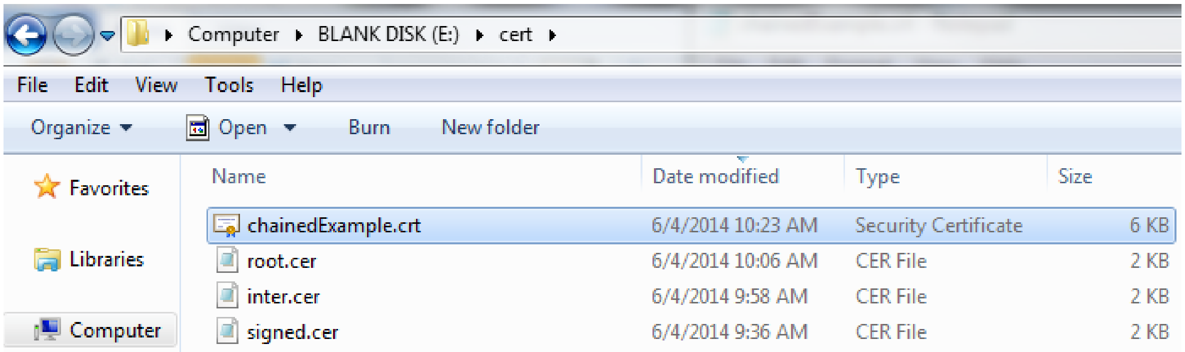
Save as type "All Files (*.*)", otherwise, it will save it as a .txt which you will have to rename later

File name: chainedExample.crt

Save as type: All Files (*.*)

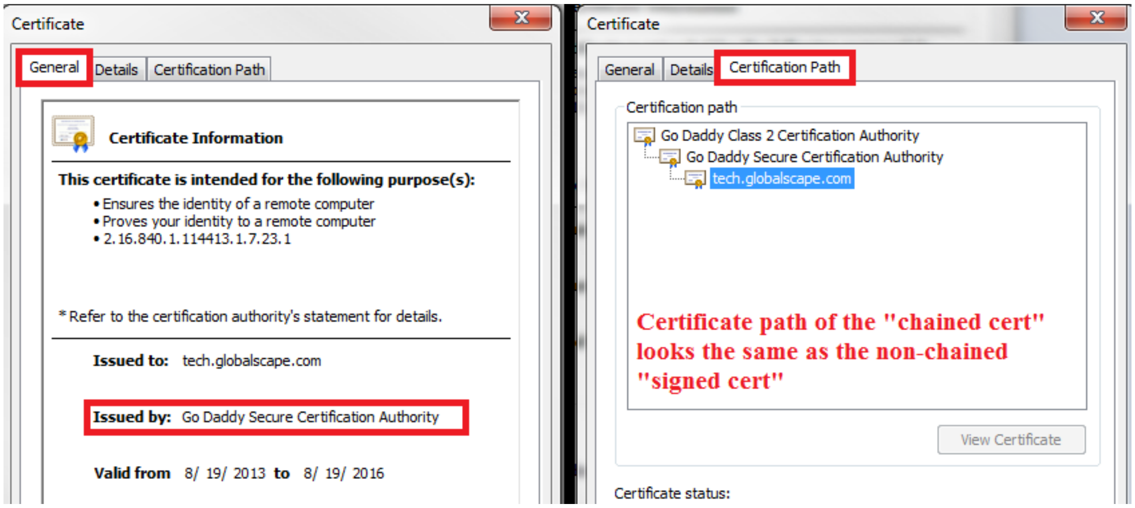
Encoding: ANSI

To verify the certificate has been chained properly, double-click to open it.



Name	Date modified	Type	Size
chainedExample.crt	6/4/2014 10:23 AM	Security Certificate	6 KB
root.cer	6/4/2014 10:06 AM	CER File	2 KB
inter.cer	6/4/2014 9:58 AM	CER File	2 KB
signed.cer	6/4/2014 9:36 AM	CER File	2 KB

The chained certificate should appear the same as the signed certificate .


Certificate

Certificate Information

This certificate is intended for the following purpose(s):

- Ensures the identity of a remote computer
- Proves your identity to a remote computer
- 2.16.840.1.114413.1.7.23.1

* Refer to the certification authority's statement for details.

Issued to: tech.globalscape.com

Issued by: Go Daddy Secure Certification Authority

Valid from 8/ 19/ 2013 **to** 8/ 19/ 2016

Certificate

Certification path

- Go Daddy Class 2 Certification Authority
  - Go Daddy Secure Certification Authority
    - tech.globalscape.com

Certificate path of the "chained cert" looks the same as the non-chained "signed cert"

Certificate status:

The major difference is that this “chained cert” physically contains each certificate file in the certification path.

When implementing into EFT, you should use this as the certificate.
Use the private key+passphrase that was generated during the certificate creation.

Alternatively, you can use the private key that was extracted from the .pfx file and saved as .key.
Or, you can use the .pfx file as the private key if it contains the private key.

If EFT is rejecting the .crt and .key due to mismatch, you can verify that they match each other by using SSLShopper’s certificate/key matcher: https://www.sslshopper.com/certificate-key-matcher.html

Try **removing** the new-lines between the …

-----END CERTIFICATE -----

-----BEGIN CERTIFICATE -----

…segments, as this can sometimes cause an issue with the certificate due to hidden (non-displayable) characters that may have been introduced.