How to purchase and install SSL certificates

How to purchase SSL certificate

1. You can purchase an SSL certificate from a domain registrar, a web-host or direct from a trusted Certificate Authority. There are several types of certificates, each with different issuance processes and for different purposes.

Certificate type	Description
Domain validated certificate	Domain validated certificates are the most basic and at the lower cost end of SSL certificates out there. Once the Certificate Authority has confirmed that the requester has control over the domain (via confirmation email, adding a DNS record, or by adding a text to the hosted website), the certificate is immediately generated and sent to the requester.
Organization validated certificate	Organization validated certificates include an additional vetting process by the Certificate Authority to verify the legitimacy of the organization. For example, the Certificate Authority may contact the person listed as the organization's primary contact during business hours or ask for documents supporting the authenticity of the organization. Unlike DV certificates, OV certificates contain legitimate business information. This is best used by commercial or public facing website whereby visitor trust is essential.
Extended validated certificate	Extended validation certificates provide the highest trust recognition for an organization. All requests for this type of certificate will go through extensive vetting of the organization by the Certificate Authority, which may result in a longer processing time. With extended validation certificates, visitors to the website will see the address bar of the browser turn green, giving visitors immediate assurance that an organization's legal and physical existence was verified according to strict industry standards. This is best used by companies who highly value consumer trust for their business and websites that deal with sensitive customer information such as payment details.
Wildcard certificate	Wildcard certificates allow customers to protect a single domain and all of its subdomains under a single SSL certificate. For example, a wildcard certificate can be used to secure *mydomain.com, mail.mydomain.com* and *login .mydomain.com*. This is particularly useful for websites with a list of subdomains that will change over time as the certificate automatically covers all of the website's subdomains.
SAN certificate	SAN supported certificates allow you to protect other domains other than the primary domain using a single SSL certificate. For example, a single SAN supported certificate can be used to protect *mydomainone.com, mydomaint wo.com, mydomainthree.com* etc.

2. Before you can continue with your SSL certificate purchase, you must first generate a certificate signing request (CSR). See 'How to generate a CSR file' for instructions.
3. Together with the CSR, provide all required information and complete the purchase transaction. Once completed, the certificate request is sent to the Certificate Authority to validate and process the request. This may take a few minutes or up to a week, depending on the type of certificate purchased.
4. Once validated, the SSL certificate is sent to you and you can then install it to your server. See 'How to install SSL certificates' for instructions.

How to generate a CSR file

Using LINUX operating system

1. Create a private key (if you're ordering an EV certificate, you should use 2048-bit encryption instead of 1024 bit)

```
openssl genrsa -out subdomain.mydomain.com.key 1024
```

2. Create a CSR based on the previously created private key

```
openssl req -new -key subdomain.mydomain.com.key -out
subdomain.mydomain.com.csr
```

3. Fill out the required fields as prompted. Please note that when creating a CSR for a wildcard certificate, Common Name should be **.mydomain.com* instead of a *subdomain.mydomain.com*.

Field	Description	Example
Country Name	2 Letter country code	CA
State or Province	Full state name	British Columbia
Locality	Full city name	Vancouver
Organization	Entity's legal name	
Organizational Unit	Optional, eg a department	
Common Name	Domain or entity name	mydomain.com

4. To review the provided information,

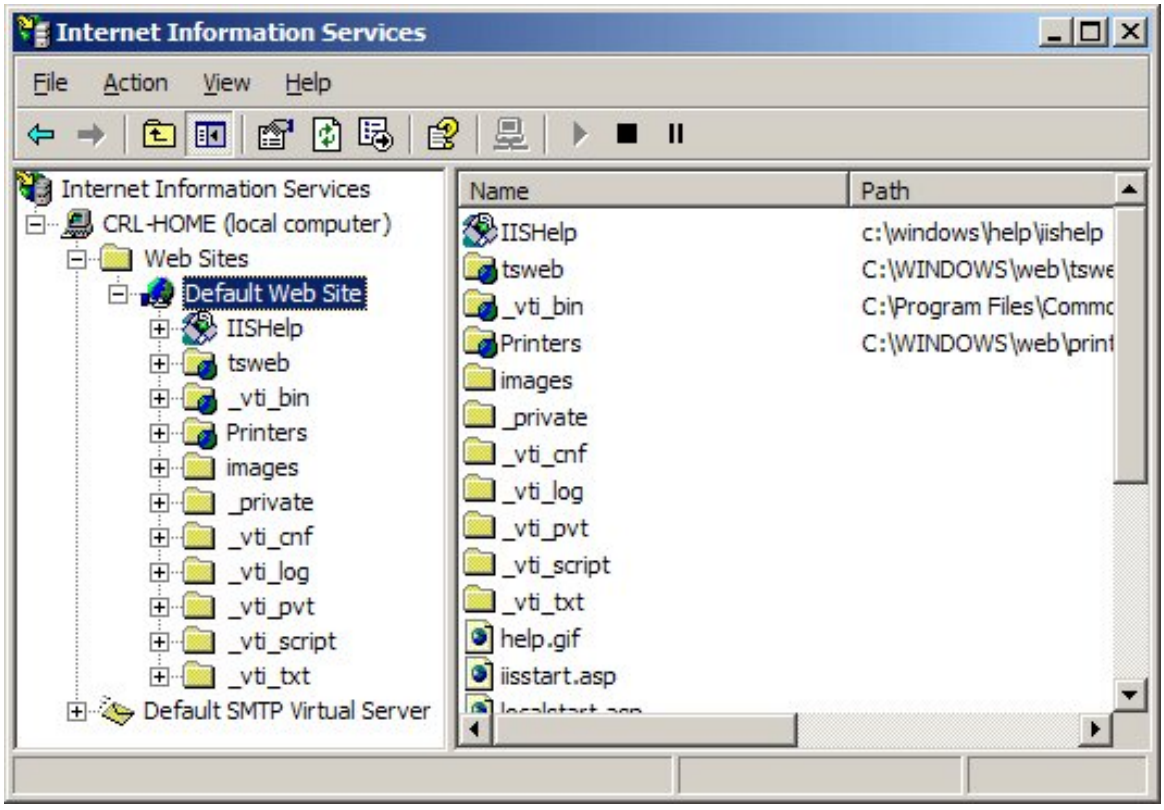
```
openssl req -noout -text -in subdomain.mydomain.com.csr
```

5. Your CSR is now available

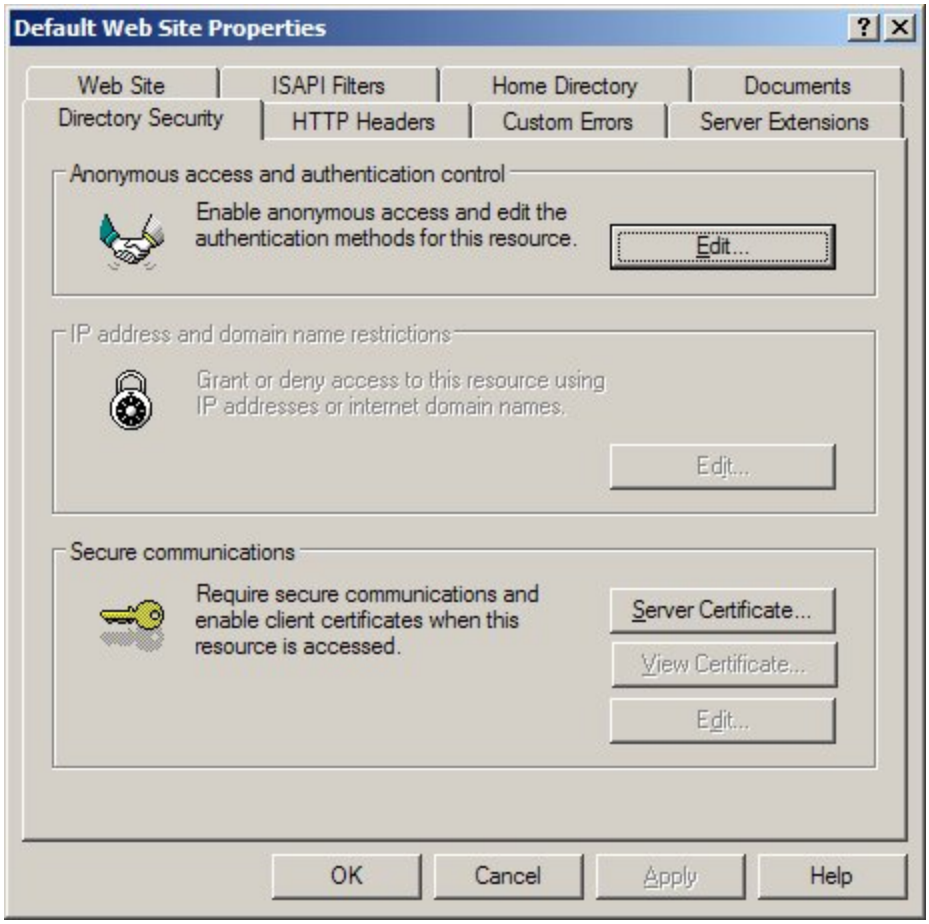
```
cat subdomain.mydomain.com.csr
```

Using Windows operating system

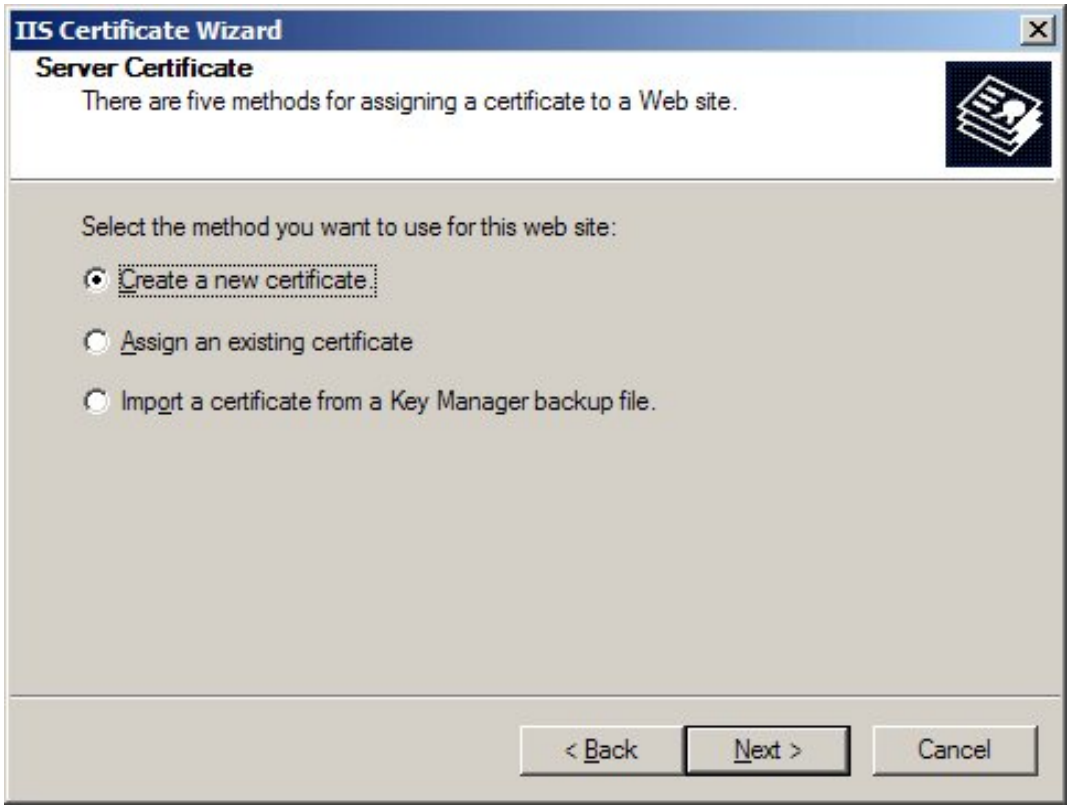
1. Select **Administrative Tools**.
2. Start **Internet Services Manager**.



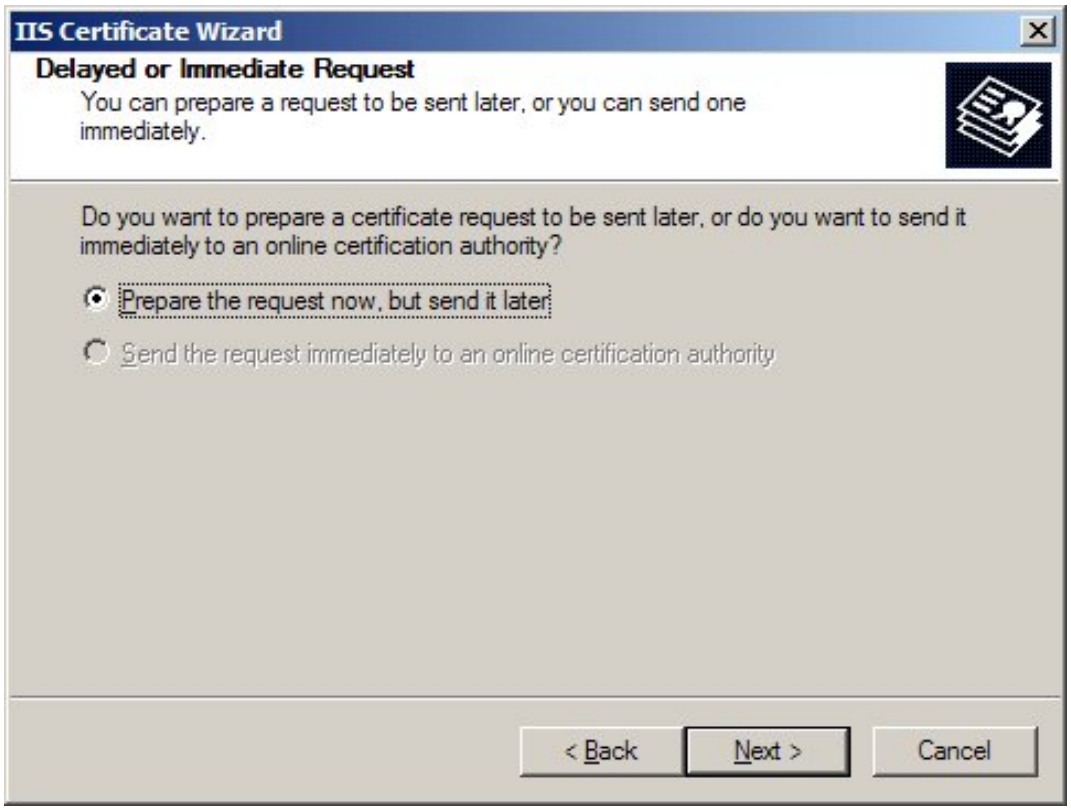
3. Open the properties window for the website the CSR is for. You can do this by right clicking on the Default Website and selecting Properties from the menu.
4. Open Directory Security by right clicking on the Directory Security tab.



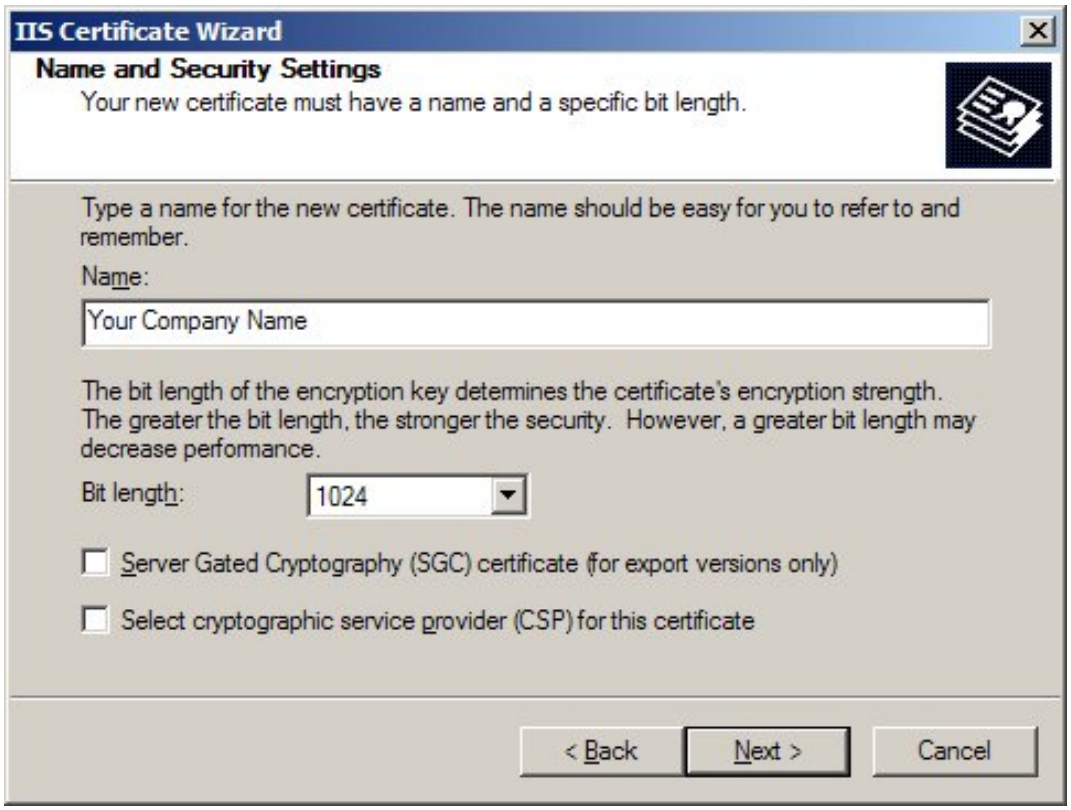
5. Click **Server Certificate.** The following wizard will appear:



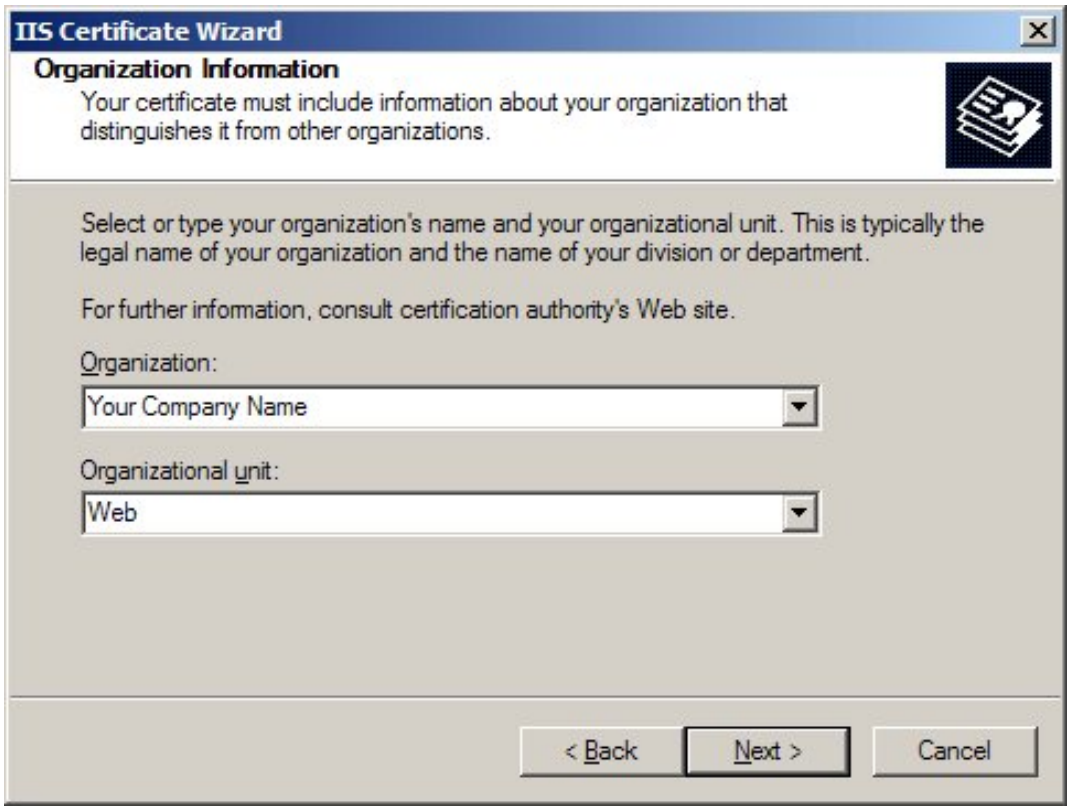
6. Click **Create a new certificate** and click **Next**.



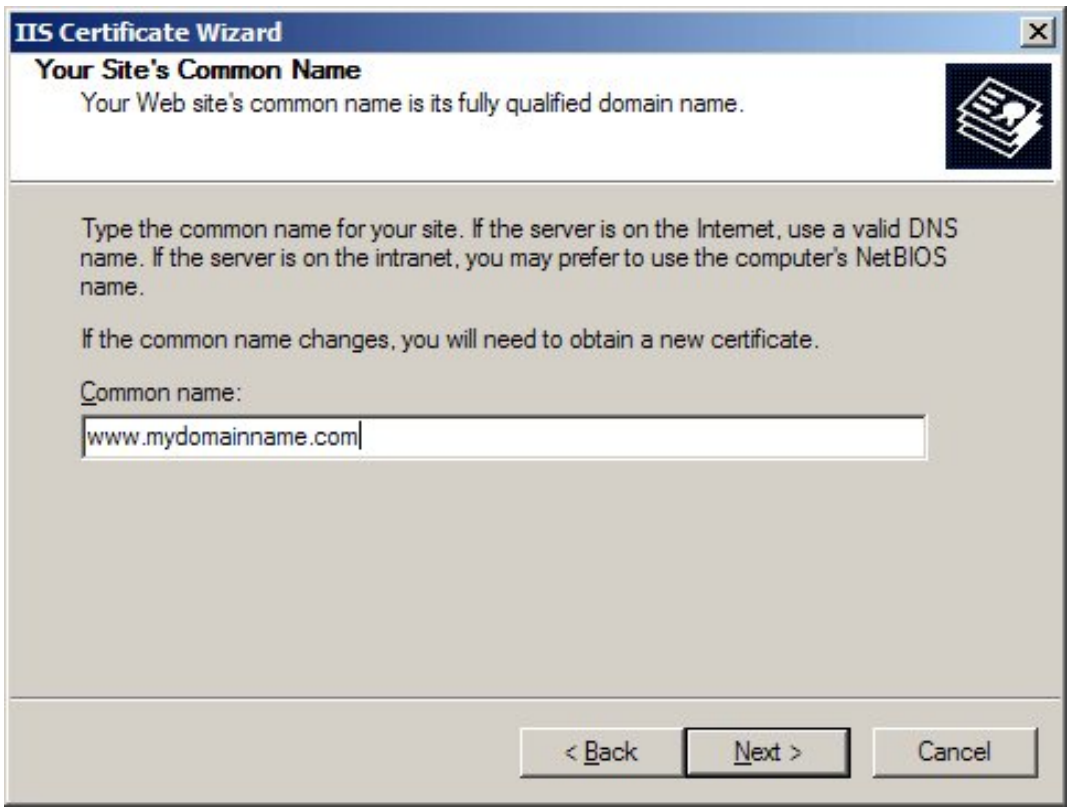
7. Select Prepare the request and click **Next**.



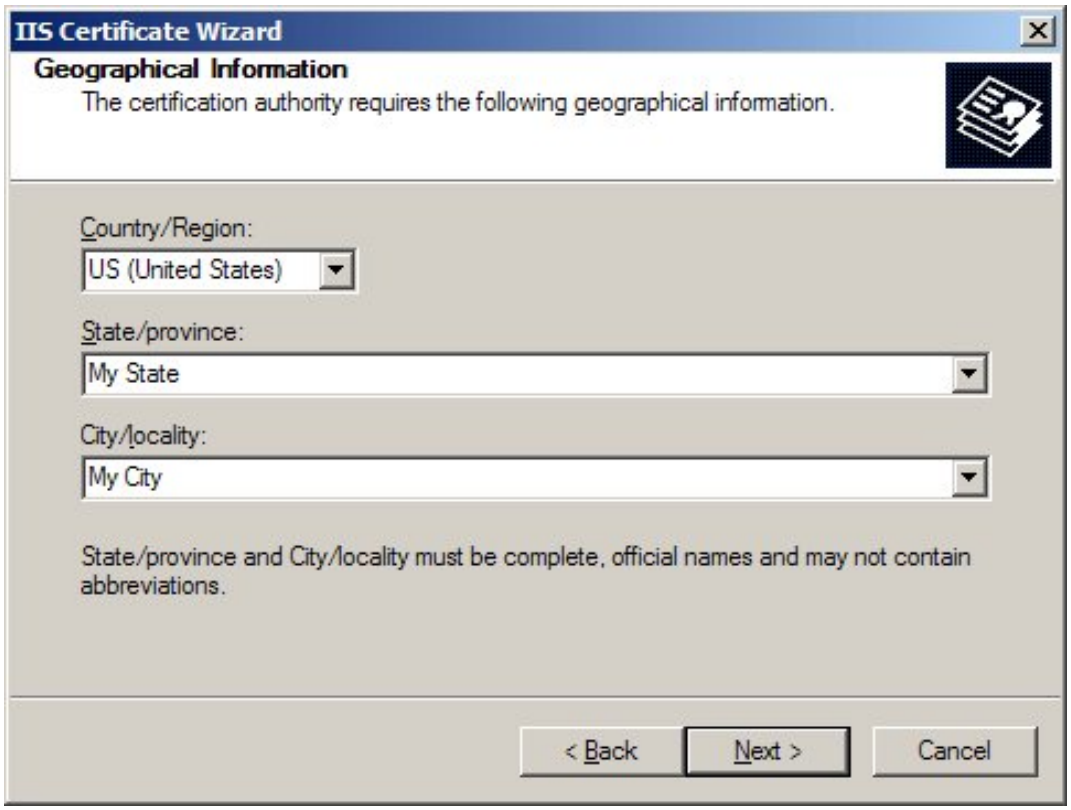
8. Provide a name for the certificate, this needs to be easily identifiable if you are working with multiple domains. This is for your records only.
9. If your server is 40 bit enabled, you will generate a 512 bit key. If your server is 128 bit you can generate up to 1024 bit keys. We recommend you stay with the default of 1024 bit key if the option is available. Click **Next.**



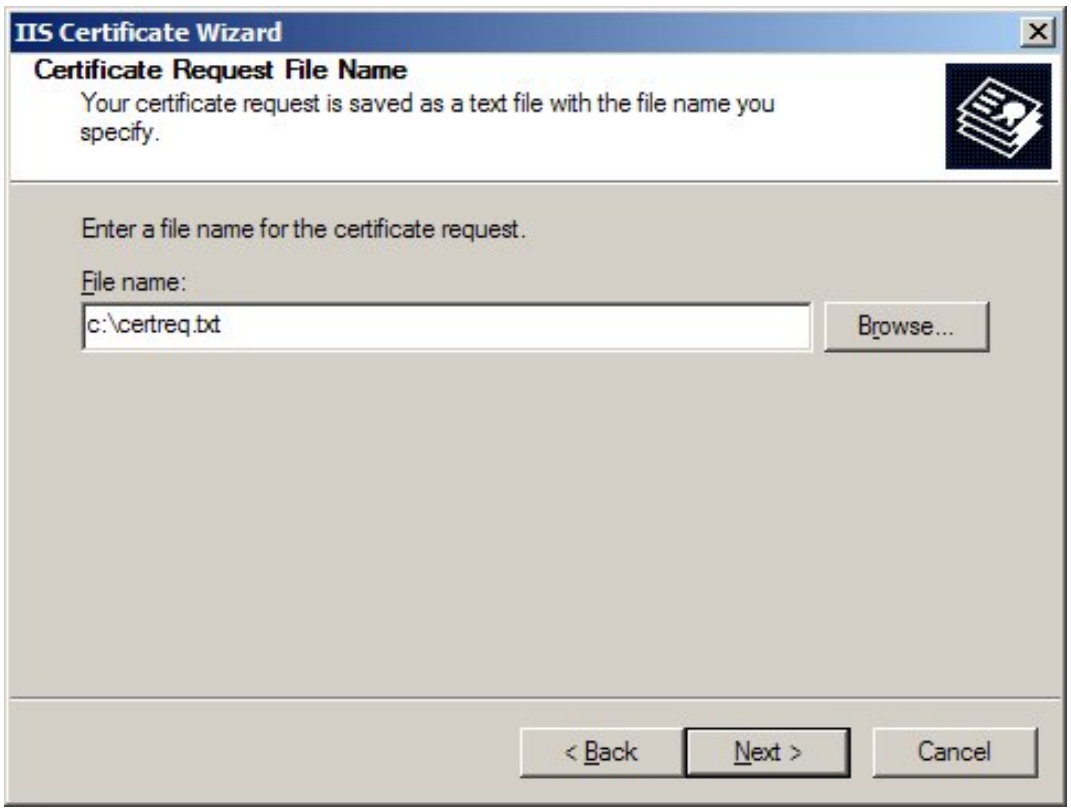
10. Enter **Organization** and **Organization Unit**, these are your company name and department respectively. Click **Next**.



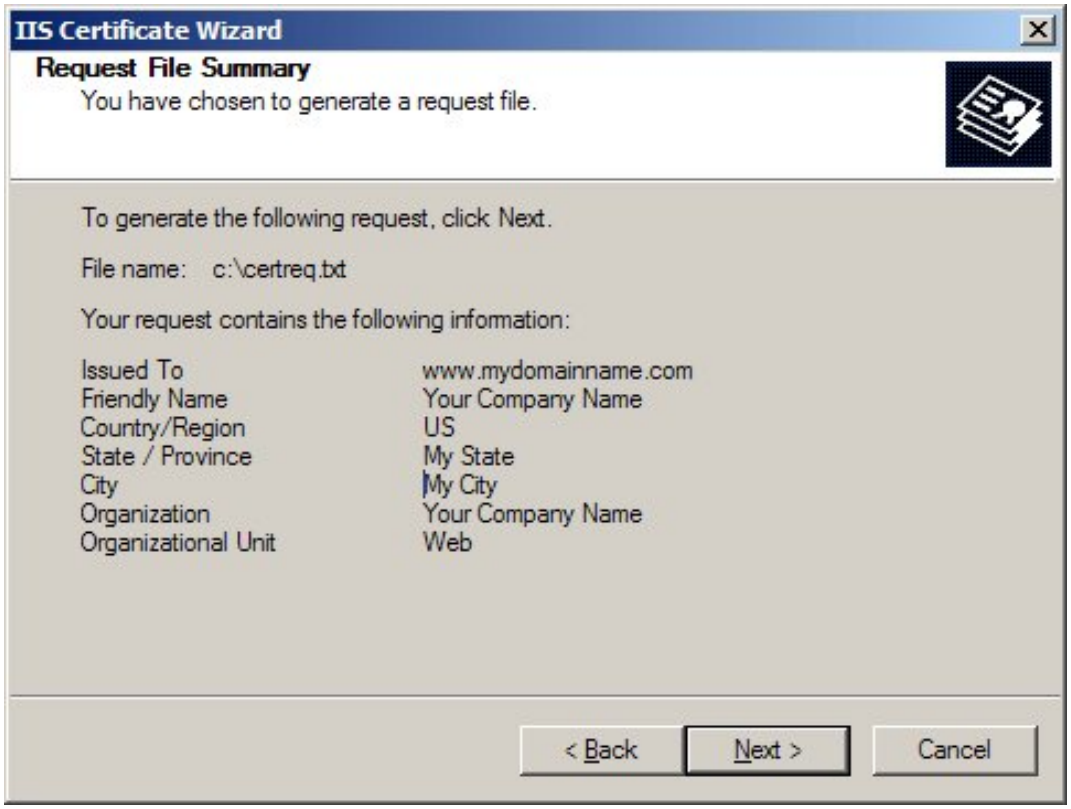
11. The Common Name field should be the Fully Qualified Domain Name (FQDN) or the web address for which you plan to use your IIS SSL Certificate, e.g. the area of your site you wish customers to connect to using SSL certificate. Click **Next**.



12. Enter your **country**, **state** and **city**. Click **Next**.



13. Enter a filename and location to save your CSR. You will need this CSR to enroll for your IIS SSL Certificate. Click **Next**.



14. Check the details you have entered. If you have made a mistake click **Back** and amend the details. Be especially sure to check the domain name the Certificate is to be "Issued To". Your IIS SSL Certificate will only work on this domain. Click **Next** when you are happy the details are absolutely correct.
15. When you make your application, make sure you include the CSR in its entirety into the appropriate section of the enrollment form - including

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

to

```
-----END CERTIFICATE REQUEST-----
```

16. Click **Next.**
17. Confirm your details in the enrollment form.
18. To save your private key
    a. Go to **Certificates snap** in the MMC
    b. Select **Requests** > **All tasks** > **Export.**

How to install SSL certificates

Apache

> Note that the location of webserver configuration file may be different than what is specified below as it may vary depending on your operating system

1. Add the SSL certificate file to the designated directory. For example, */usr/local/apache/conf/ssl.crt* or */etc/httpd/conf/ssl.crt*.
2. Open **httpd.conf** file in a text editor.
3. Locate the secure virtual host pertaining to your order. You should have the following directives within this virtual host (otherwise, please add them).

```
SSLCertificateFile /usr/local/apache/conf/ssl.crt/mydomain.com.crt
SSLCertificateKeyFile /usr/local/apache/conf/ssl.key/mydomain.com.key
```

   For Comodo certificates:

```
SSLCertificateChainFile /usr/local/apache/conf/ssl.key/mydomain.com.ca
```

4. Save the changes and exit the editor.
5. Restart your Apache web server *(Default: /usr/local/apache/bin/apachectl startssl or /usr/local/apache/bin/apachectl restart).*
6. Test your SSL certificate by connecting to your server. Use the https protocol directive (for example, https://yourserver/).

Apache 2

> Note that the location of webserver configuration file may be different than what is specified below as it may vary depending on your operating system

1. Add the SSL certificate file to the designated directory. For example, */usr/local/apache2/conf/ssl.crt*.
2. Open **apache2.conf** file in a text editor.
3. Locate the secure virtual host pertaining to your order. You shoudl have the following directives within this virtual host (otherwise, please add them).

```
SSLCertificateFile /usr/local/apache2/conf/ssl.crt/mydomain.com.crt
SSLCertificateKeyFile /usr/local/apache2/conf/ssl.key/mydomain.com.key
```

   For Comodo certificates,

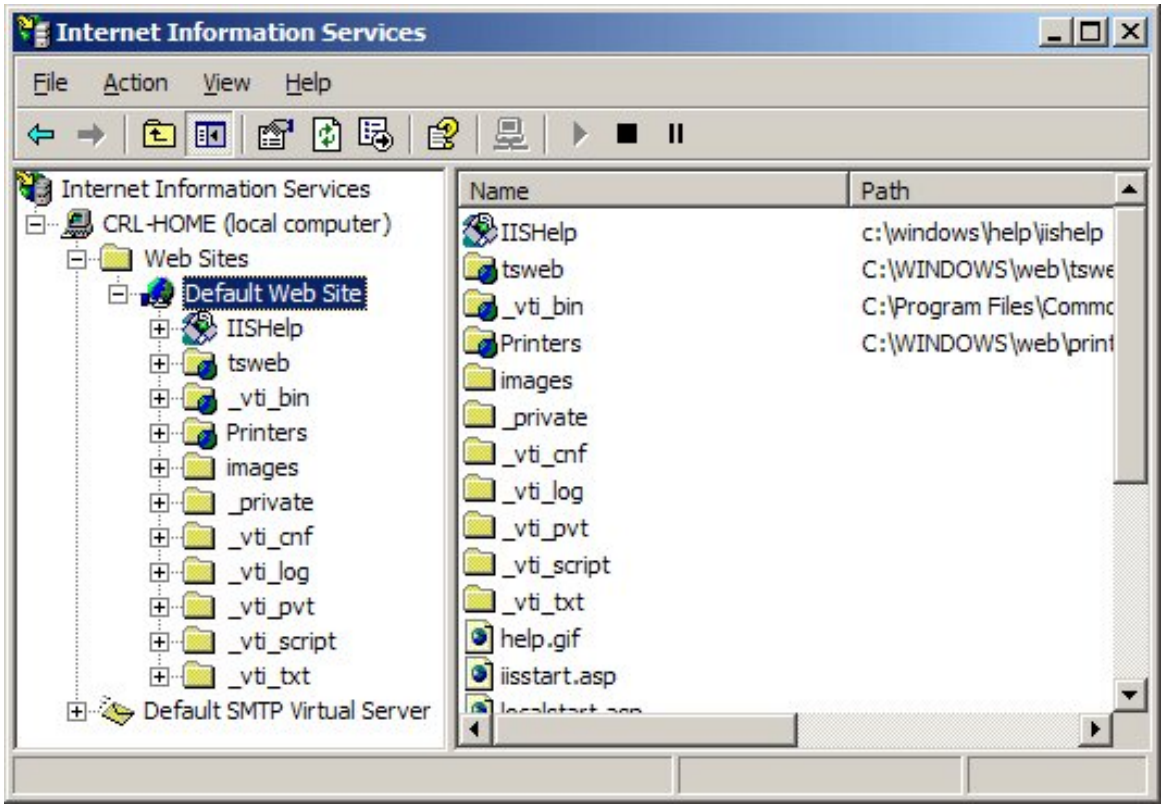
```
SSLCertificateChainFile /usr/local/apache/conf/ssl.key/mydomain.com.ca
```

4. Save the changes and exit the editor.
5. Restart your apache web server *(Default: /usr/local/apache2/bin/apachectl stop and /usr/local/apache2/bin/apachectl start).*
6. Test your SSL certificate by connecting to your server. Use the https protocol directive (for example, https://yourserver/).

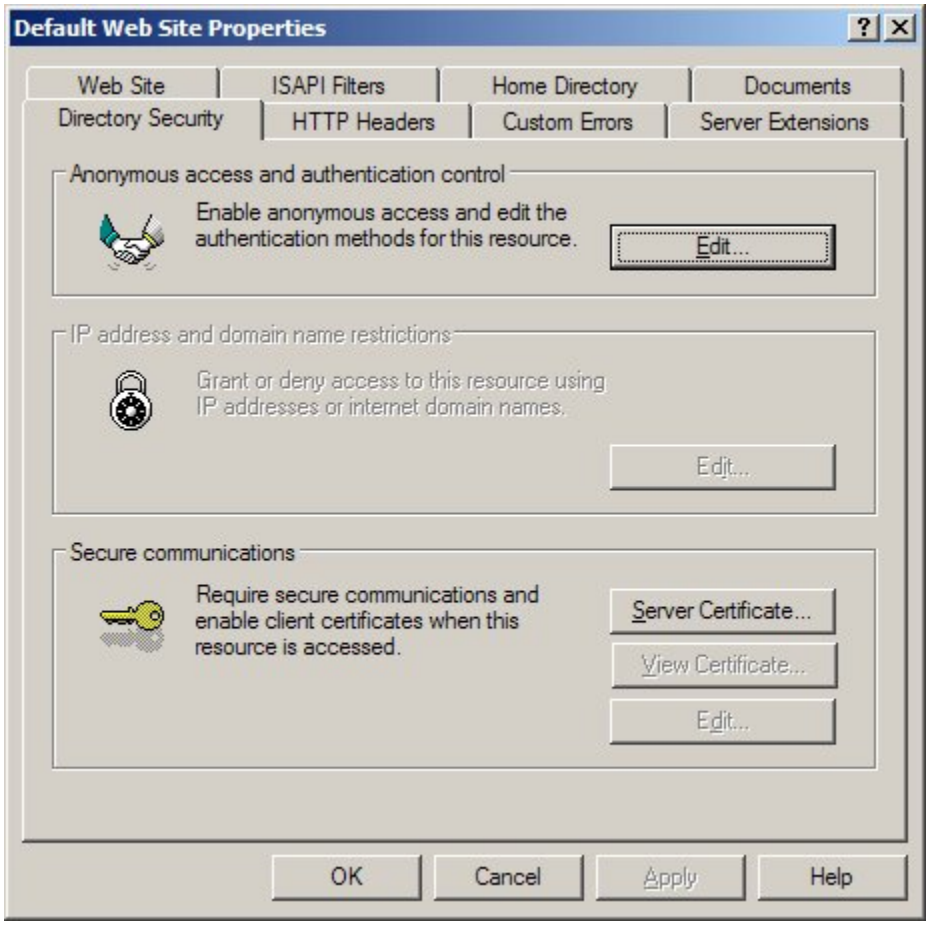
Further information can be found in the official apache documentation.

Microsoft IIS

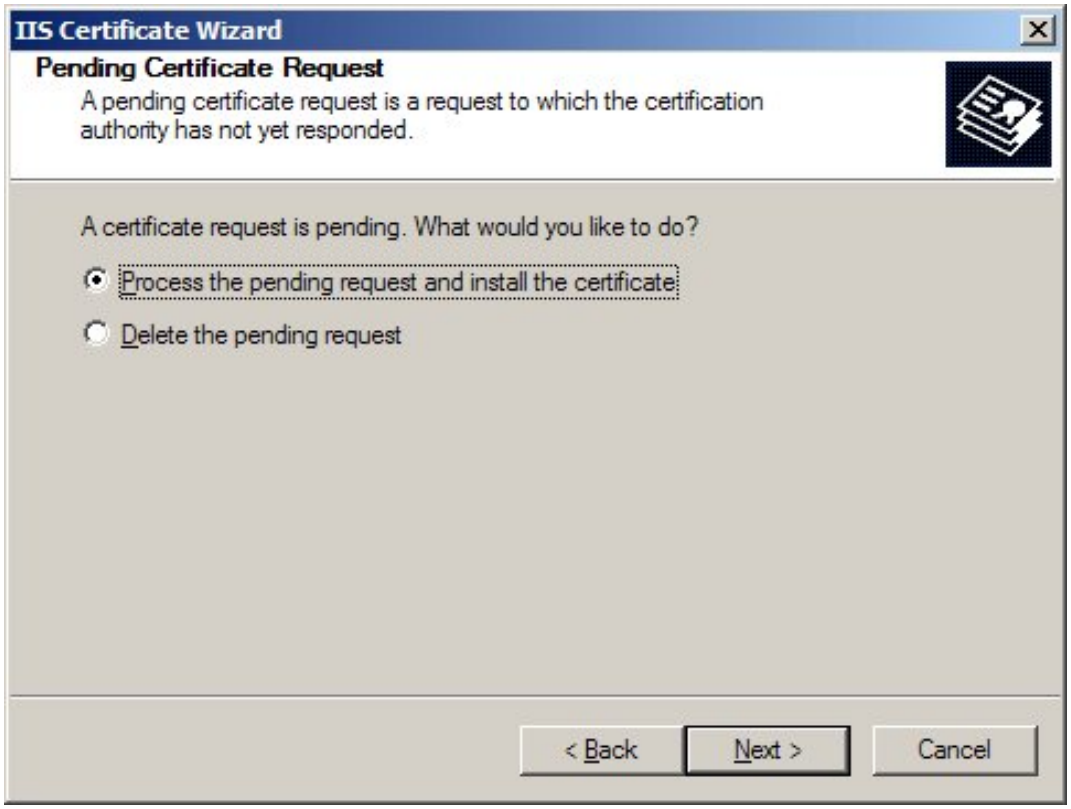
1. Select **Administrative Tools**.
2. Select **Internet Services Manager**.



3. Right click on Default Website and select Properties from the menu.
4. Right click on **Directory Security** tab.



5. Click on **Server Certificate.** The following wizard will appear:



6. Select Process the pending request and install the certificate option. Click Next.
7. Select the location of your SSL certificate and click **Next**.
8. Make sure that you are processing the right SSL certificate and all information is accurate. Click **Next**.
9. You will see a confirmation screen. When you have read the information, click **Next**.
10. Your SSL certificate is now installed on your server.

Note that you must restart your computer to complete the installation process.