HTTPS 憑證安裝
IIS

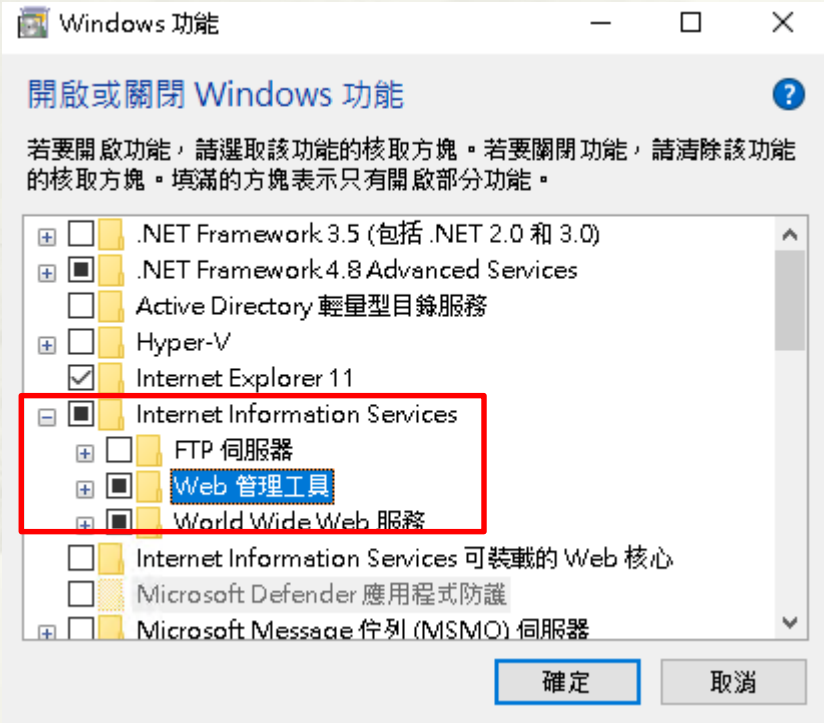
臺灣大學計資中心
網路組
游子興

大綱

* Install IIS
* Install Server Certificate
  * Manual
    * Create CSR File and Import Server Certificate
    * Import .pfx (Certificate/Private Key)
  * Automatic
    * win-acme Without IIS
    * win-acme With IIS

Install IIS @ Windows10

* 開始 > 設定 > 應用程式 > 程式和功能: 開啟或關閉 Windows 功能
* Internet Information Service
  * Web 管理工具
  * World Wide Web 服務

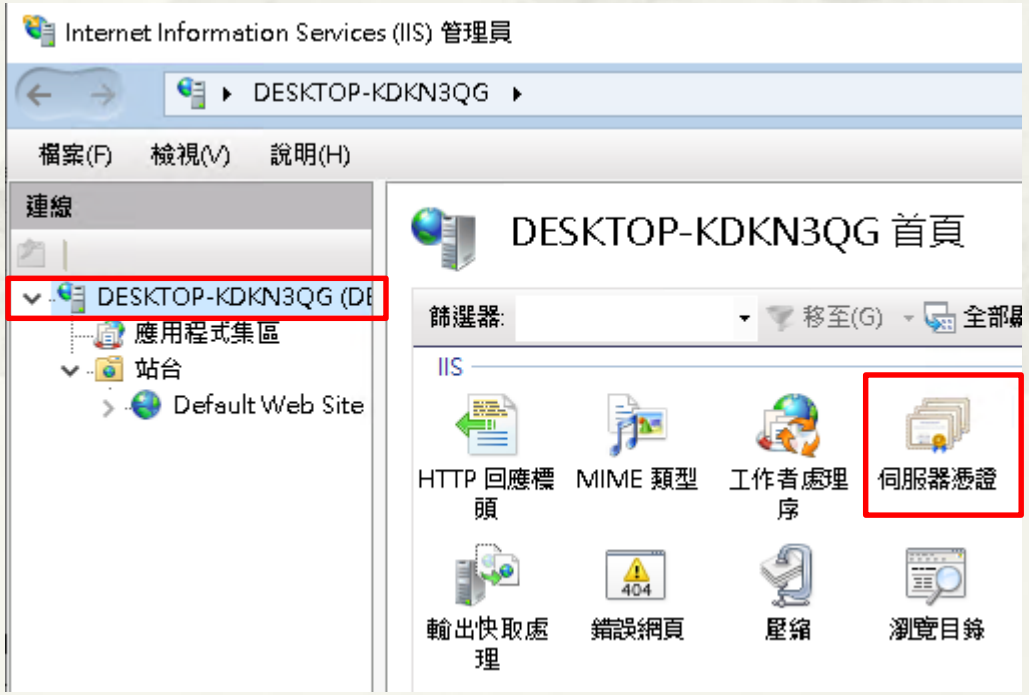


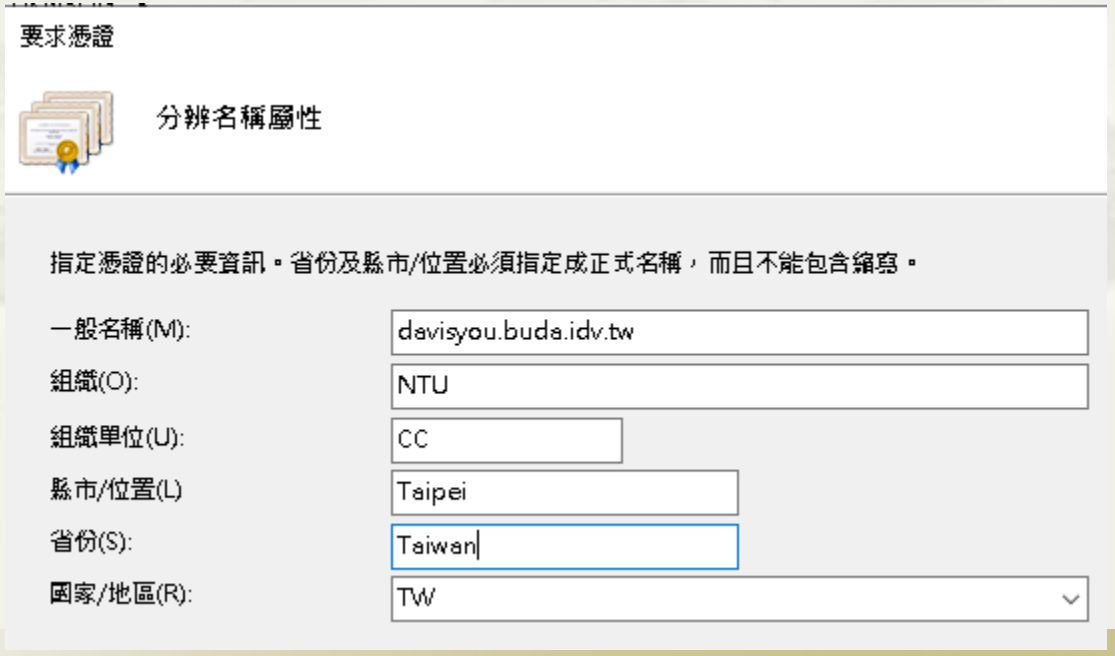
Manual Install
Create CSR File
Import Server Certificate

Certificate Signing Request

Create CSR File

* 開始 > Windows 系統管理工具 > Internet Information Services(IIS)





Create CSR File

* CSR File

server.txt - 記事本

檔案(F) 編輯(E) 格式(O) 檢視(V) 說明

```
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-----END NEW CERTIFICATE REQUEST-----
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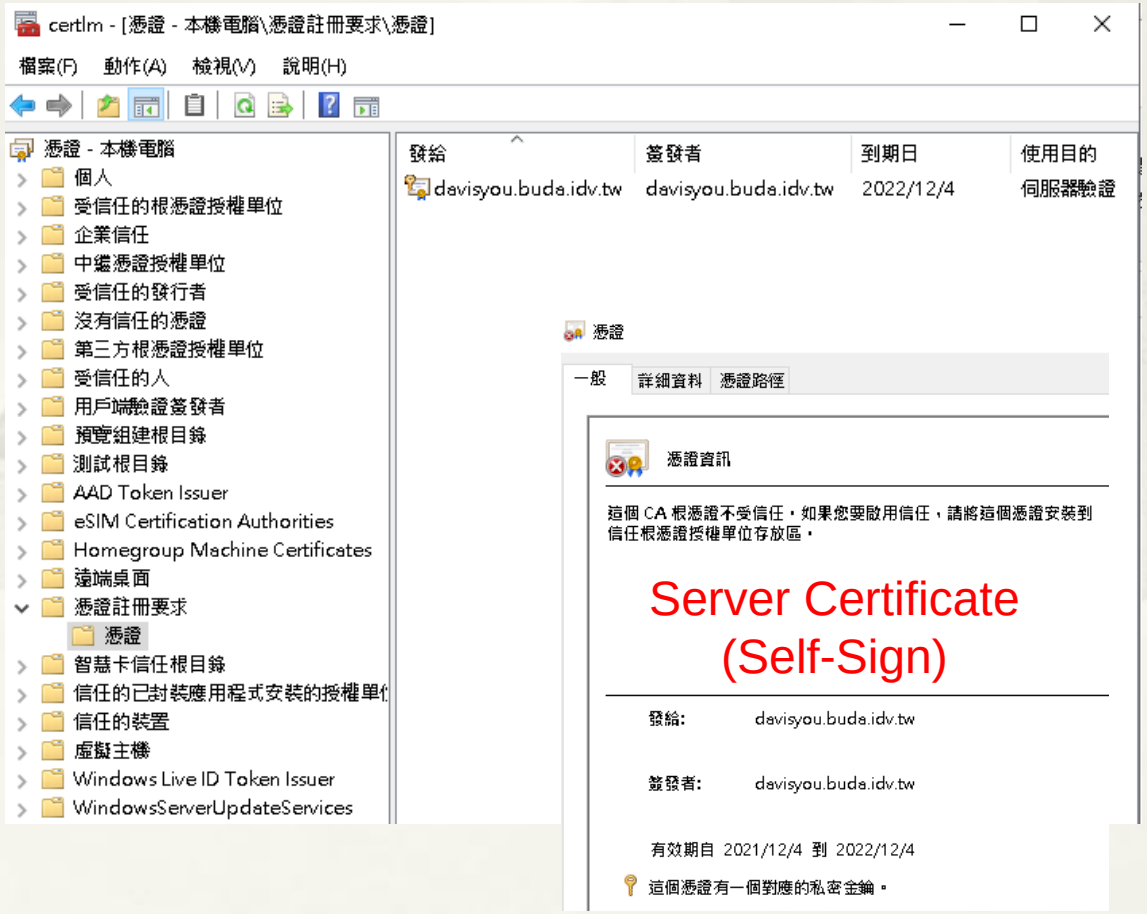
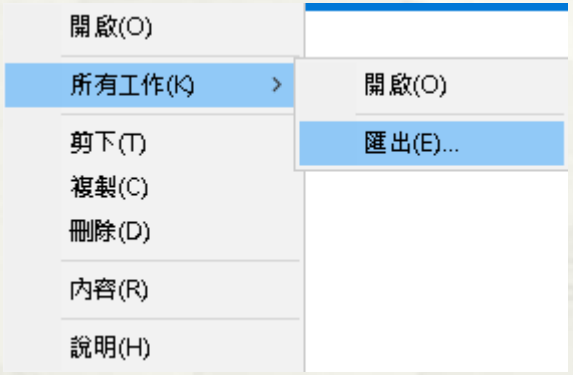
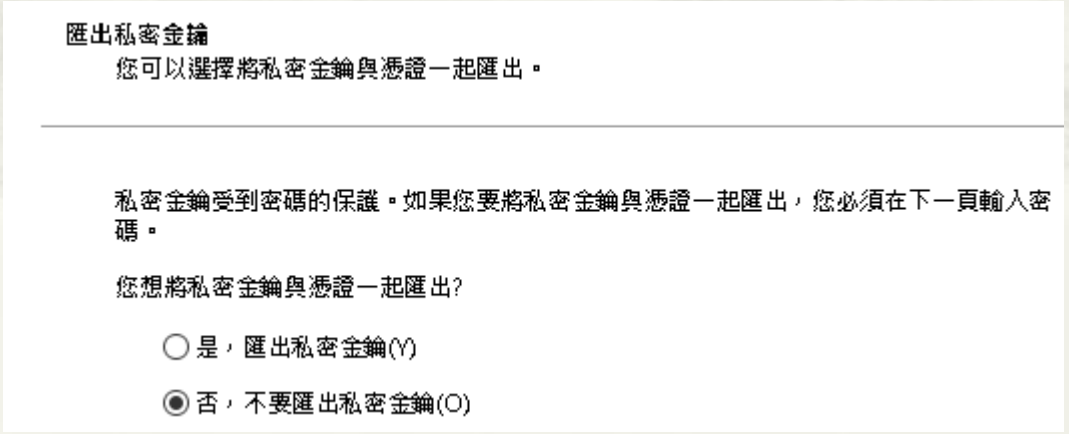
匯出 Server Certificate/Private Key

* certlm.msc (本機電腦)



* 匯出 Server Certificate





匯出 Server Certificate (Self-Sign)

匯出檔案格式

憑證可以用多種檔案格式匯出。

請選取您想要使用的格式:

- ○ DER 編碼二位元 X.509 (.CER)(D)
- ◉ Base-64 編碼 X.509 (.CER)(S)
- ○ 密碼編譯訊息語法標準 - PKCS #7 憑證 (.P7B)(C)
  - ☐ 如果可能的話，包含憑證路徑中的所有憑證(I)
- ○ 個人資訊交換 - PKCS #12 (.PFX)(P)
  - ☐ 如果可能的話，包含憑證路徑中的所有憑證(U)
  - ☐ 如果匯出成功即刪除私密金鑰(K)
  - ☐ 匯出所有延伸內容(A)
  - ☐ 啟用憑證隱私權(E)
- ○ Microsoft 序列憑證存放區 (.SST)(T)

要匯出的檔案

請指定您要匯出的檔案名稱

檔案名稱(F):

C:\Users\user\Documents\cert.cer　[瀏覽(R)...]

cert.cer - 記事本

檔案(F)　編輯(E)　格式(O)　檢視(V)　說明

```
-----BEGIN CERTIFICATE-----
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bzb8v0Qo6EImSme3cyGbSCEV02+pPUyz+Ao4p9ZNtd7Tn4c1a/dH/EmpL842fyQn
zy0=
-----END CERTIFICATE-----
```

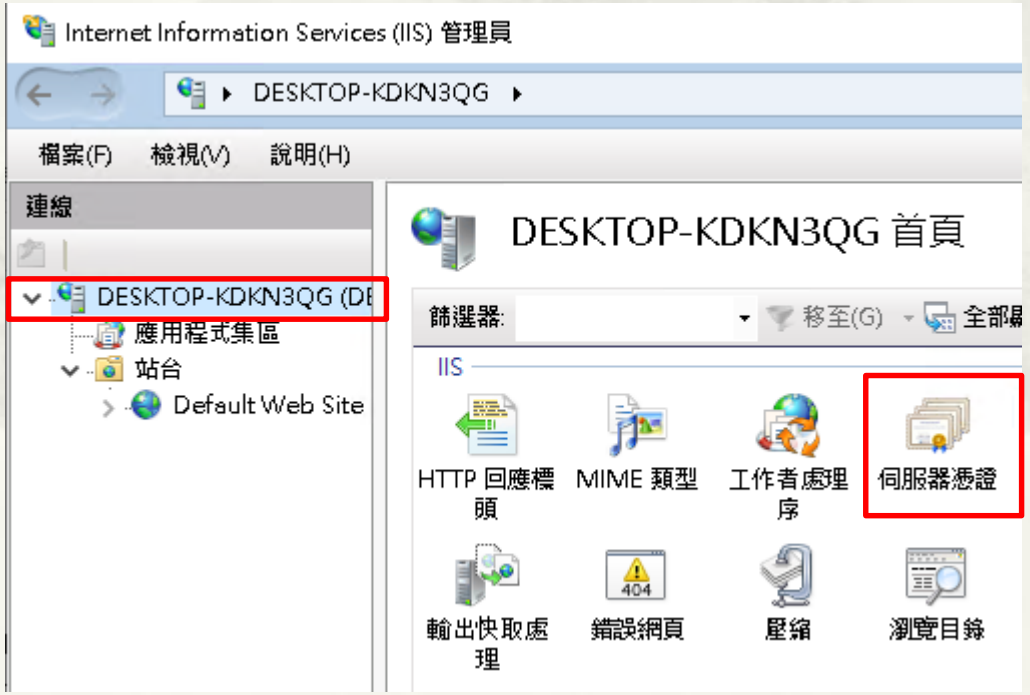
建立憑證要求

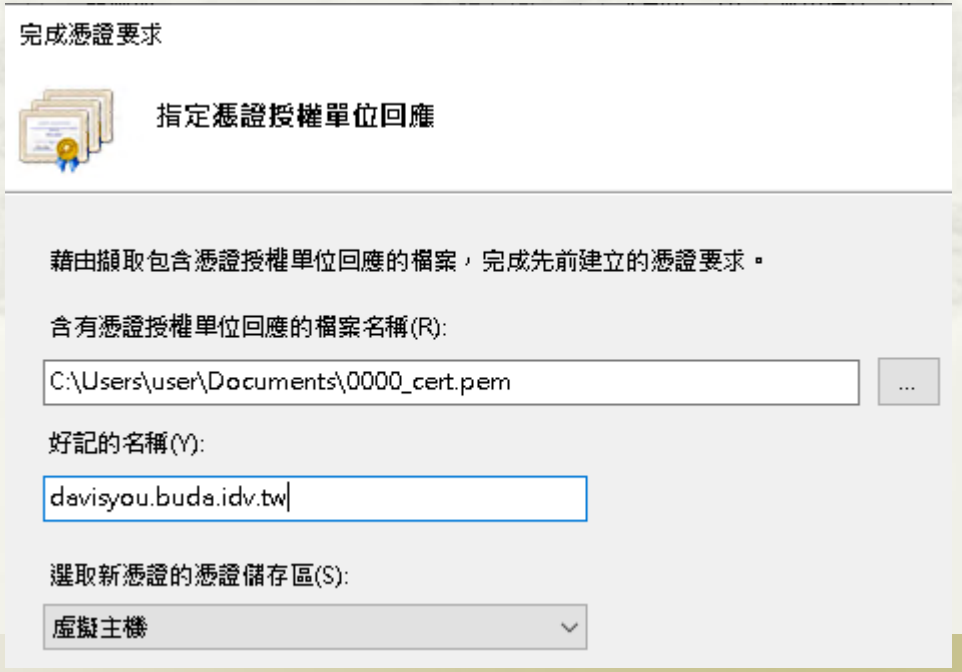
Background Steps

* Private Key
* Certificate Signing Request
* Server Certificate (Self-Sign)

Import Server Certificate

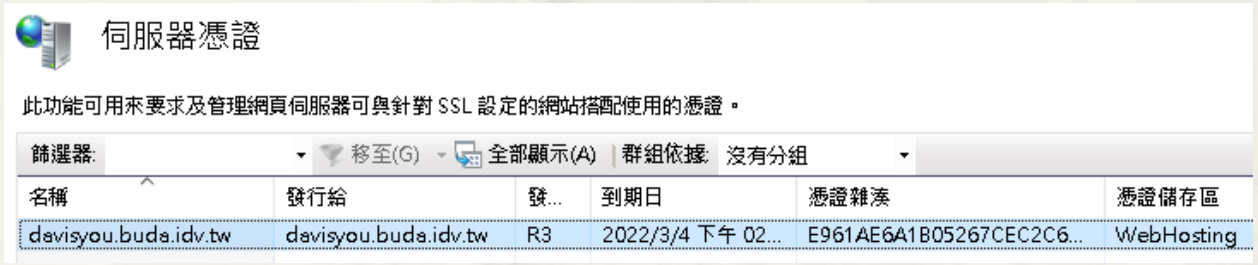
* 開始 > Windows 系統管理工具 > Internet Information Services(IIS)

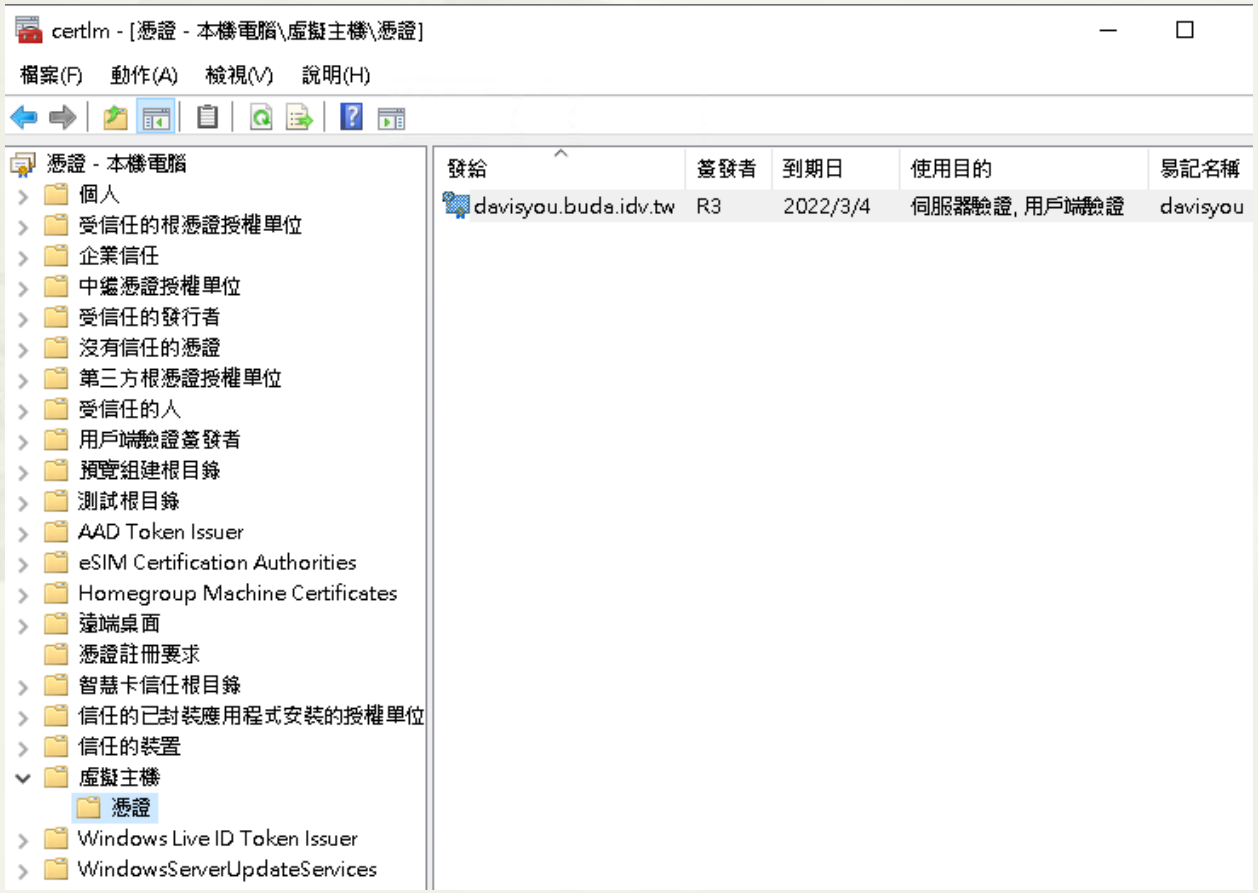




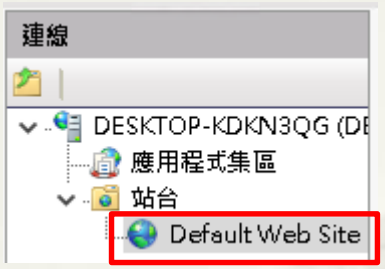
Import Server Certificate

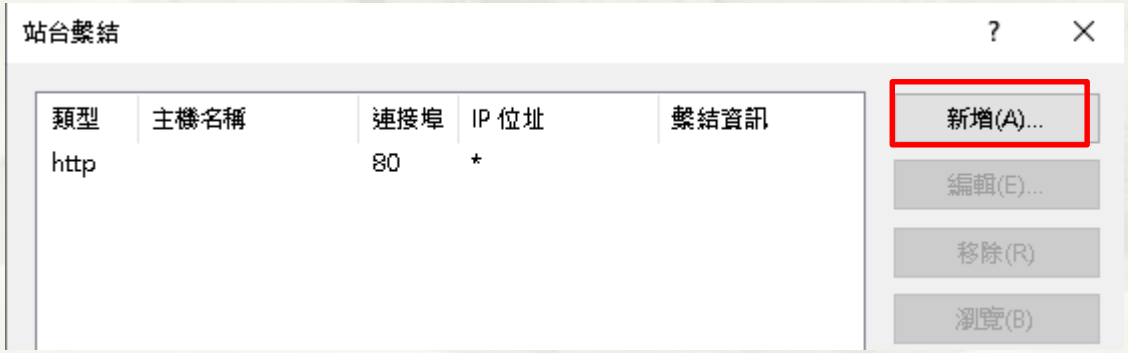
* certlm.msc (本機電腦)

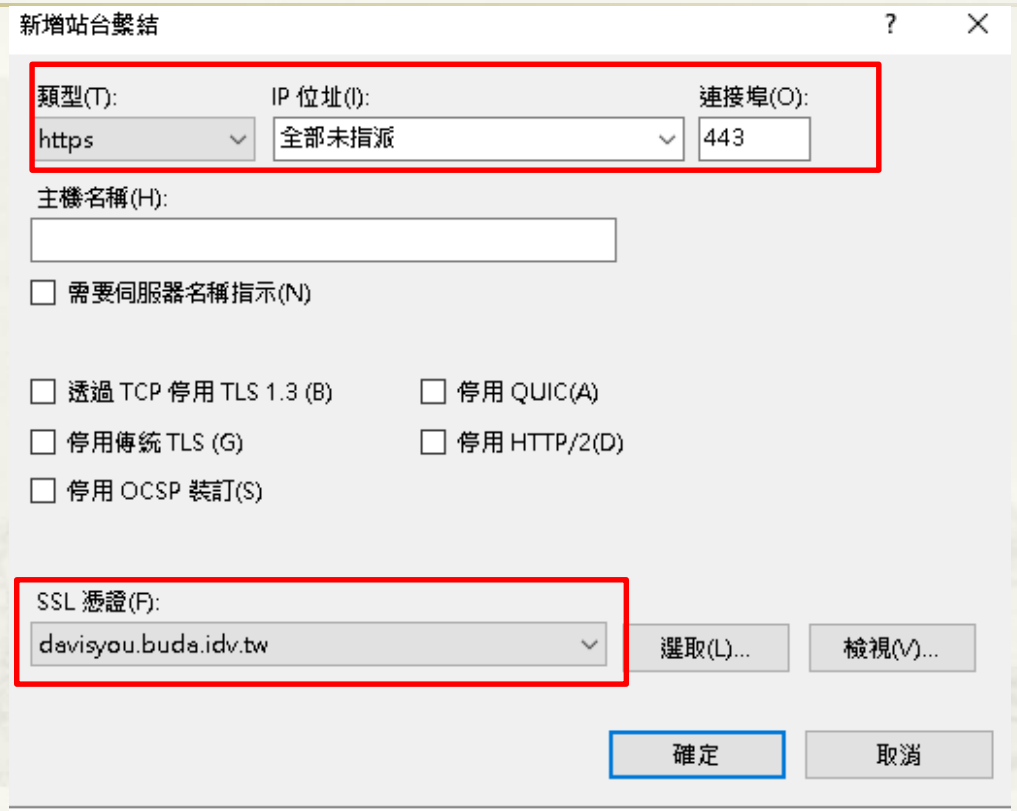


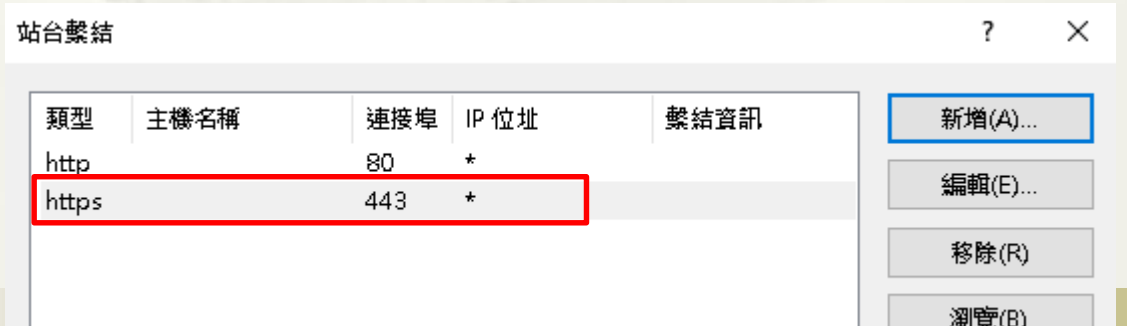


HTTPS Config



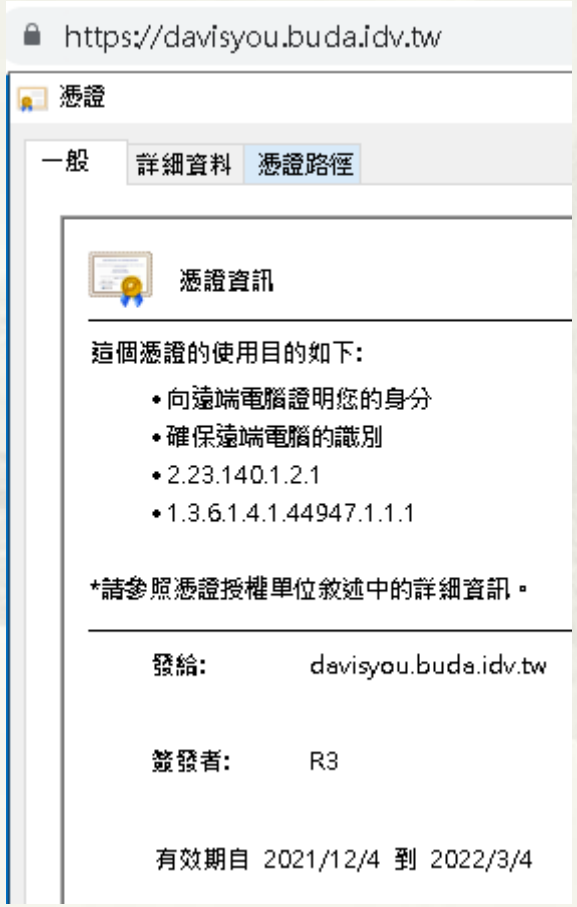




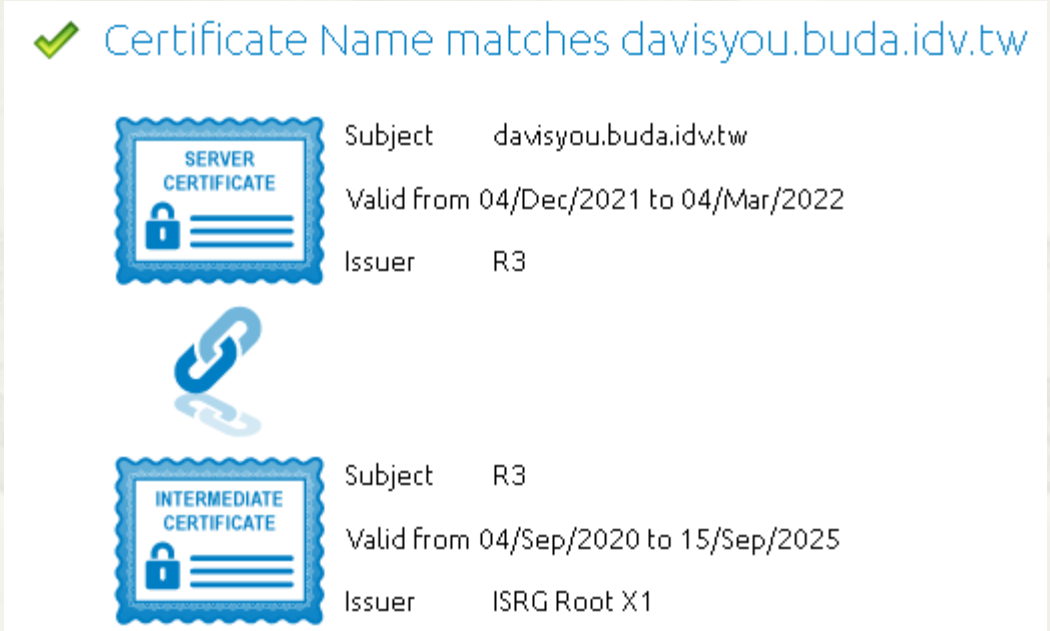


Check

* https://davisyou.buda.idv.tw



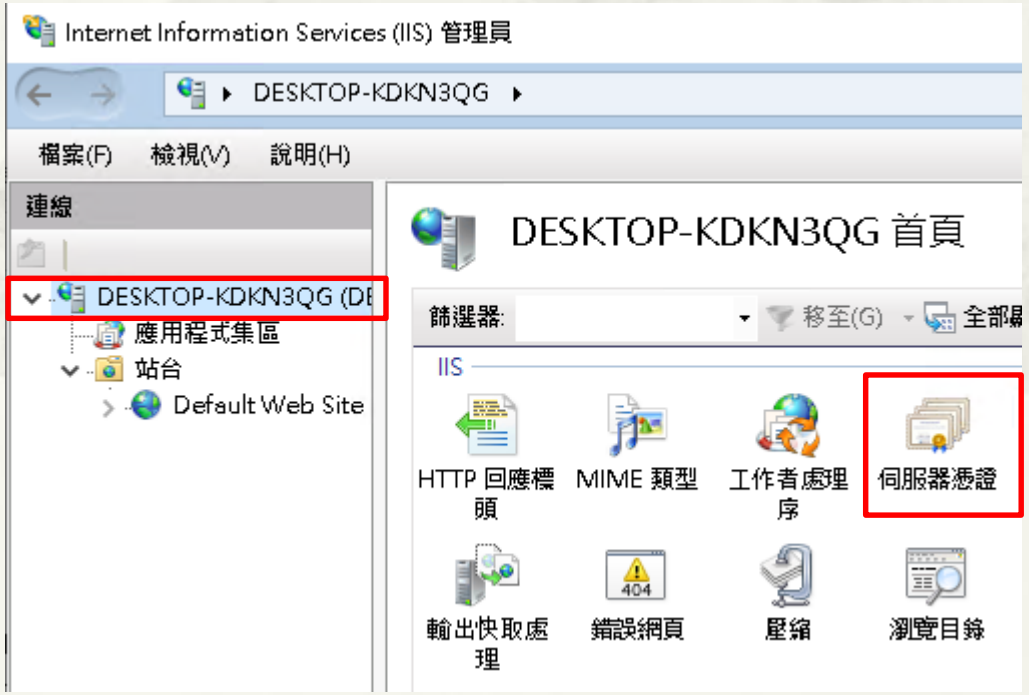
* Certificate Chain
* https://www.digicert.com/help/

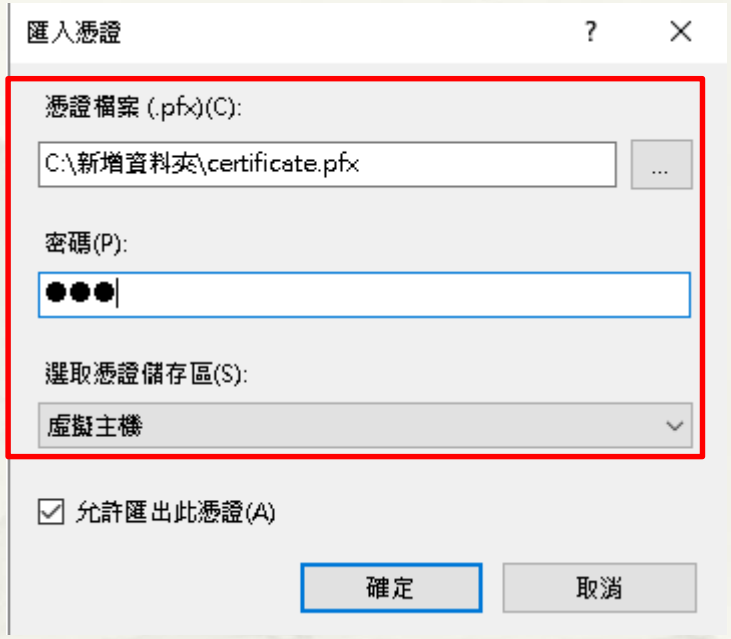


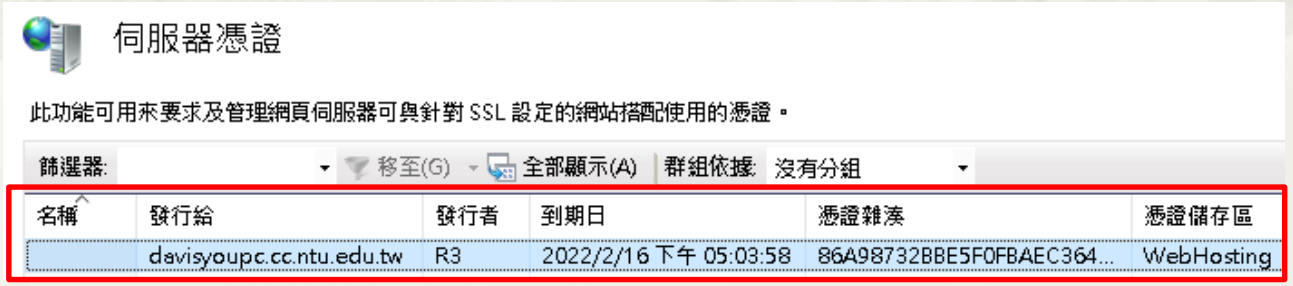
Manual
Import .pfx
(Certificate/Private Key)

Install Certificate

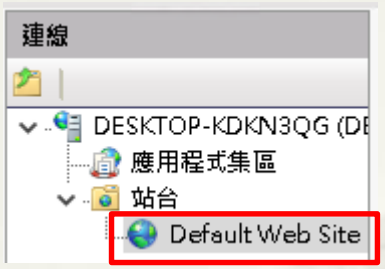
* 開始 > Windows 系統管理工具 > Internet Information Services(IIS)

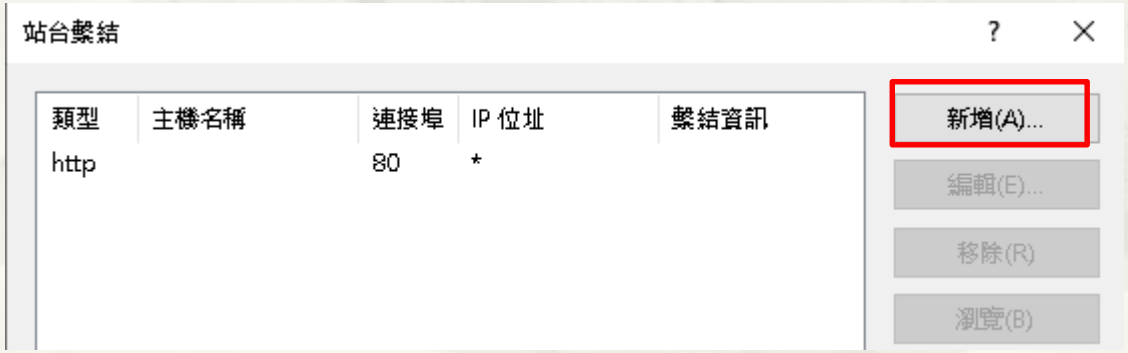


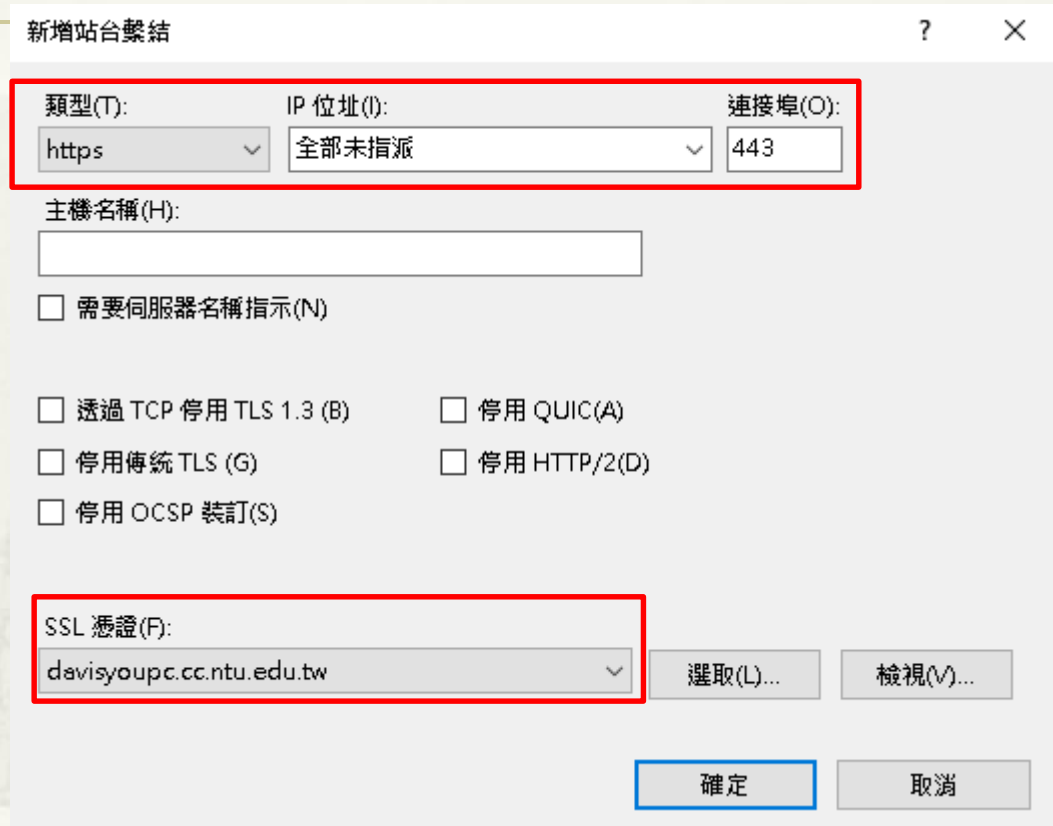


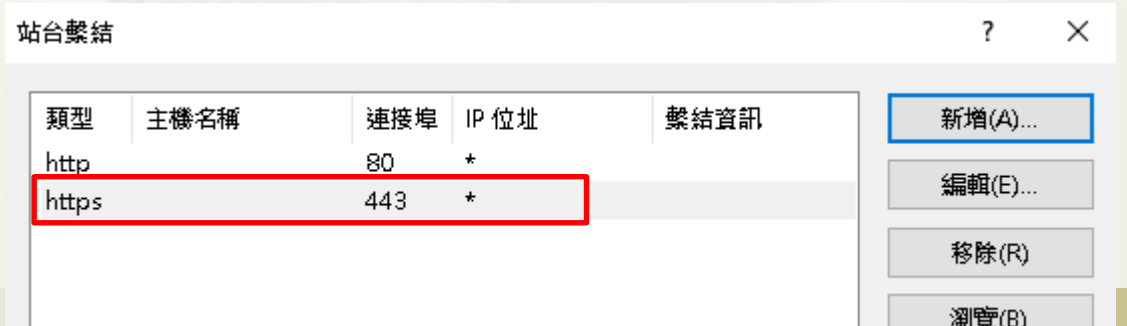


HTTPS Config





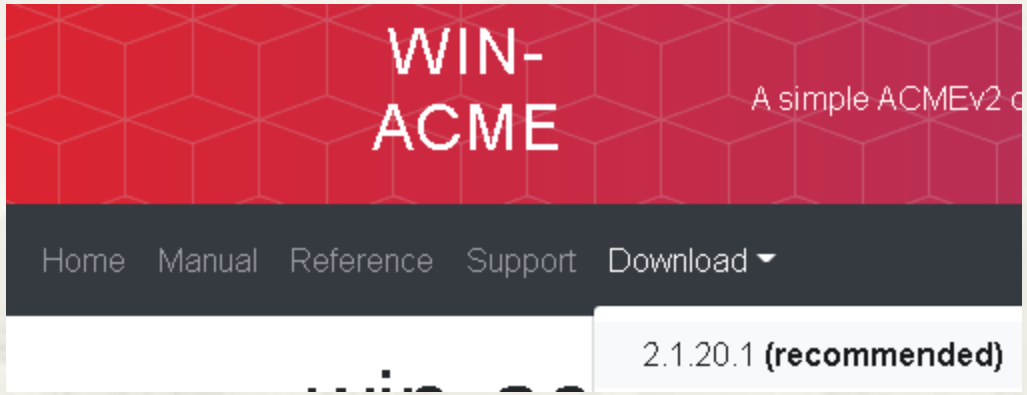




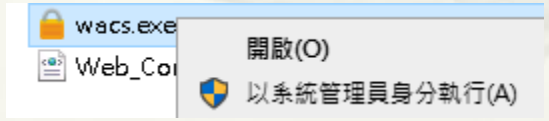
Install win-acme

win-acme Without IIS

* https://www.win-acme.com/

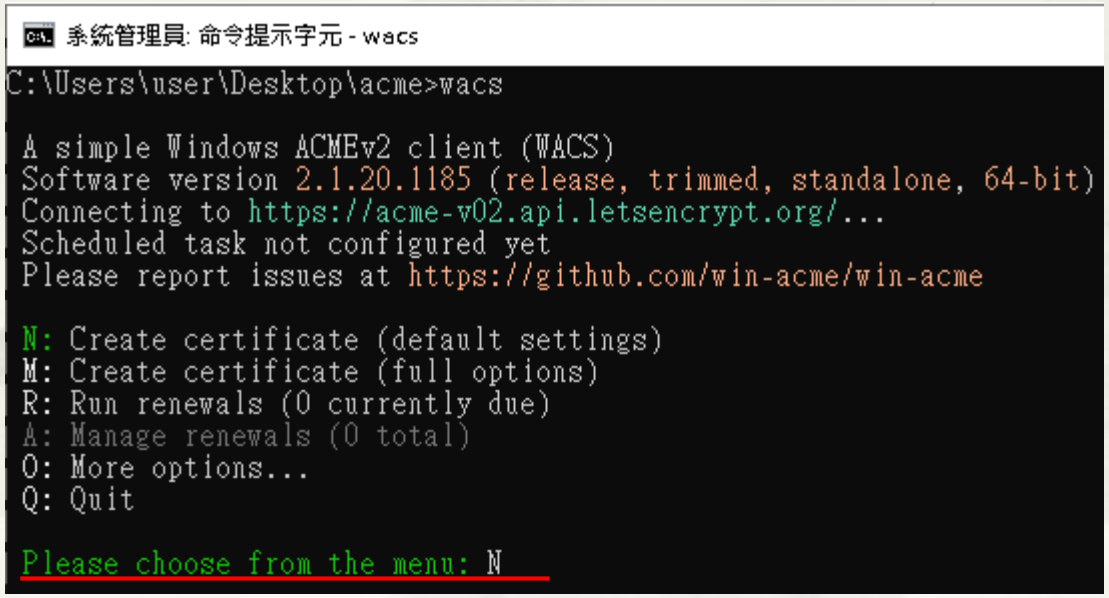


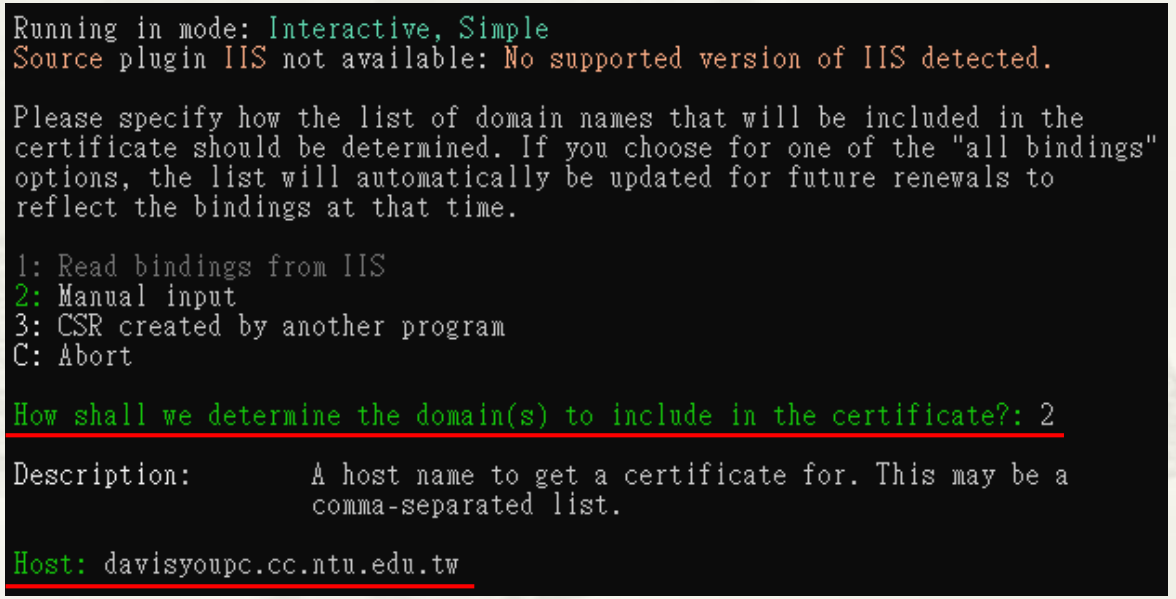
* Unzip win-acme.v2.1.20.1185.x64.trimmed.zip
* 系統管理者執行



win-acme
Without IIS

win-acme Without IIS





win-acme Without IIS

```
Source generated using plugin Manual: davisyoupc.cc.ntu.edu.tw
Installation plugin IIS not available: No supported version of IIS detected.

With the certificate saved to the store(s) of your choice, you may choose one
or more steps to update your applications, e.g. to configure the new
thumbprint, or to update bindings.

1: Create or update bindings in IIS
2: Start external script or program
3: No (additional) installation steps

Which installation step should run first?: 3

Terms of service:   C:\ProgramData\win-acme\acme-v02.api.letsencrypt.org\LE-SA-v1.2-November-15-2017.pdf

Open in default application? (y/n*) - <Enter>

Do you agree with the terms? (y*/n) - <Enter>

Enter email(s) for notifications about problems and abuse (comma-separated): davisyou@ntu.edu.tw
```

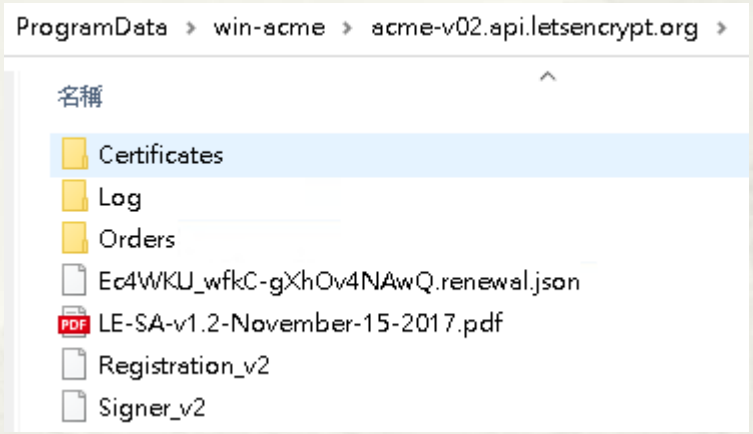
```
[davisyoupc.cc.ntu.edu.tw] Authorizing...
[davisyoupc.cc.ntu.edu.tw] Authorizing using http-01 validation (SelfHosting)
[davisyoupc.cc.ntu.edu.tw] Authorization result: valid
Downloading certificate [Manual] davisyoupc.cc.ntu.edu.tw
Store with CertificateStore...
Installing certificate in the certificate store
Adding certificate [Manual] davisyoupc.cc.ntu.edu.tw @ 2021/11/22 18:06:11 to store My
Installing with None...
Adding Task Scheduler entry with the following settings
- Name win-acme renew (acme-v02.api.letsencrypt.org)
- Path C:\Users\user\Desktop\acme
- Command wacs.exe --renew --baseuri "https://acme-v02.api.letsencrypt.org/"
- Start at 09:00:00
- Random delay 04:00:00
- Time limit 02:00:00
Adding renewal for [Manual] davisyoupc.cc.ntu.edu.tw
Next renewal scheduled at 2022/1/16 18:05:19
Certificate [Manual] davisyoupc.cc.ntu.edu.tw created

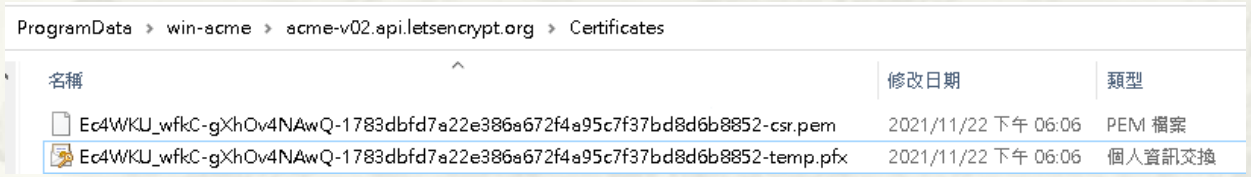
N: Create certificate (default settings)
M: Create certificate (full options)
R: Run renewals (0 currently due)
A: Manage renewals (1 total)
O: More options...
Q: Quit

Please choose from the menu: Q
```

win-acme Without IIS

* C:\ProgramData\win-acme

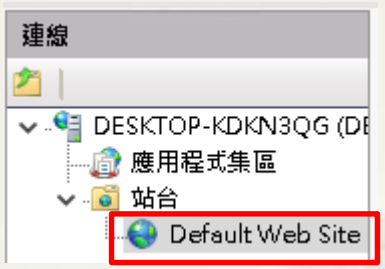


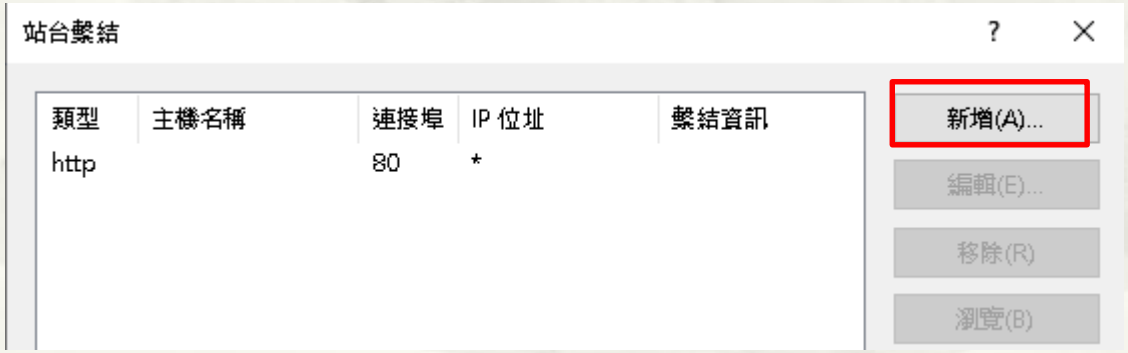


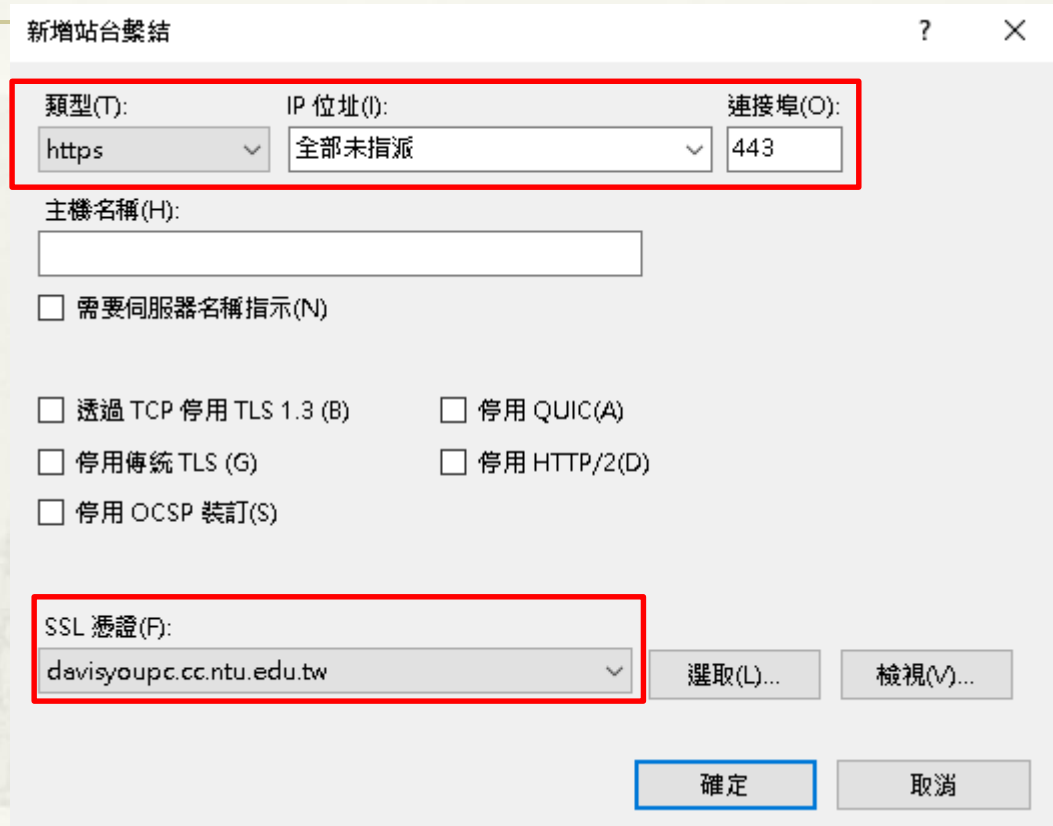
* certlm.msc (本機電腦)

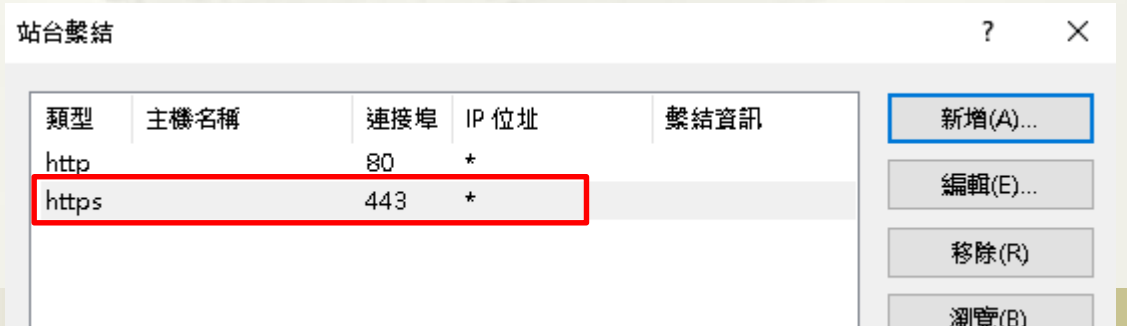
* 安裝 IIS
  * 伺服器憑證已安裝

HTTPS Config



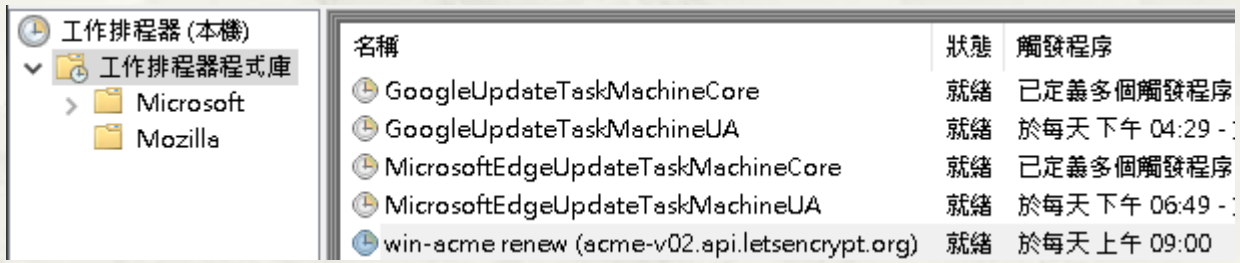


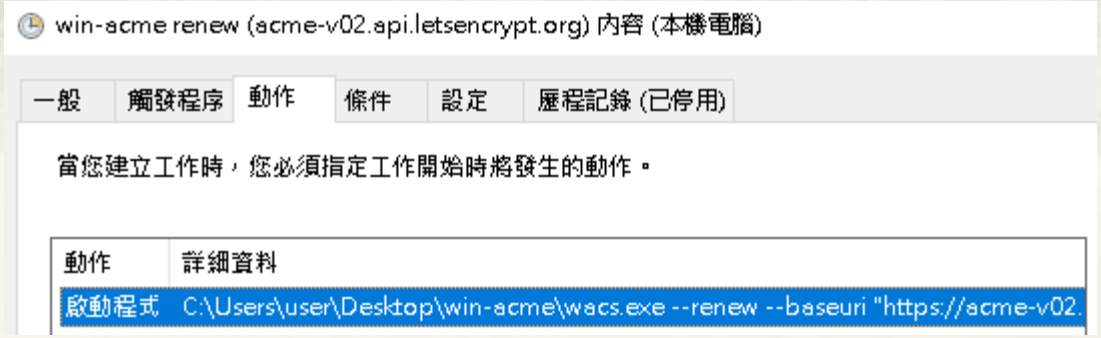




Auto Renew

- 在安裝完 win-acme 之後，win-acme 會自動在「工作排程器」建立一個排程，執行週期是每天
- 開始 > Windows 系統管理工具 > 工作排程器



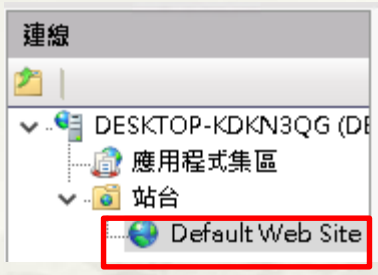


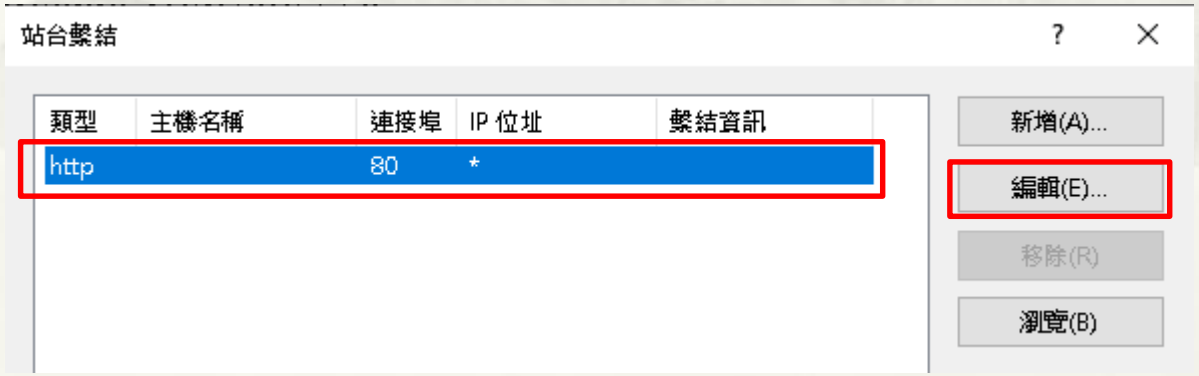
win-acme Without IIS Background Steps

* Create .pfx and Import to Windows Cert Store
  * Private Key
  * Server Certificate
* 工作排程器
  * Auto Renew Job

win-acme
With IIS

win-acme With IIS





win-acme With IIS

```
A simple Windows ACMEv2 client (WACS)
Software version 2.1.20.1185 (release, trimmed, standalone, 64-bit)
Connecting to https://acme-v02.api.letsencrypt.org/...
Scheduled task not configured yet
Please report issues at https://github.com/win-acme/win-acme

N: Create certificate (default settings)
M: Create certificate (full options)
R: Run renewals (0 currently due)
A: Manage renewals (0 total)
O: More options...
Q: Quit

Please choose from the menu: N

Running in mode: Interactive, Simple

Please select which website(s) should be scanned for host names. You may
input one or more site identifiers (comma-separated) to filter by those
sites, or alternatively leave the input empty to scan *all* websites.

1: Default Web Site (1 binding)

Site identifier(s) or <Enter> to choose all: <Enter>
```

```
1: davisyou.buda.idv.tw (Site 1)

Listed above are the bindings found on the selected site(s). By default all
of them will be included, but you may either pick specific ones by typing the
host names or identifiers (comma-separated) or filter them using one of the
options from the menu.

P: Pick bindings based on a search pattern
A: Pick *all* bindings

Binding identifiers(s) or menu option: A

1: davisyou.buda.idv.tw (Site 1)

Continue with this selection? (y*/n) - <Enter>

Source generated using plugin IIS: davisyou.buda.idv.tw

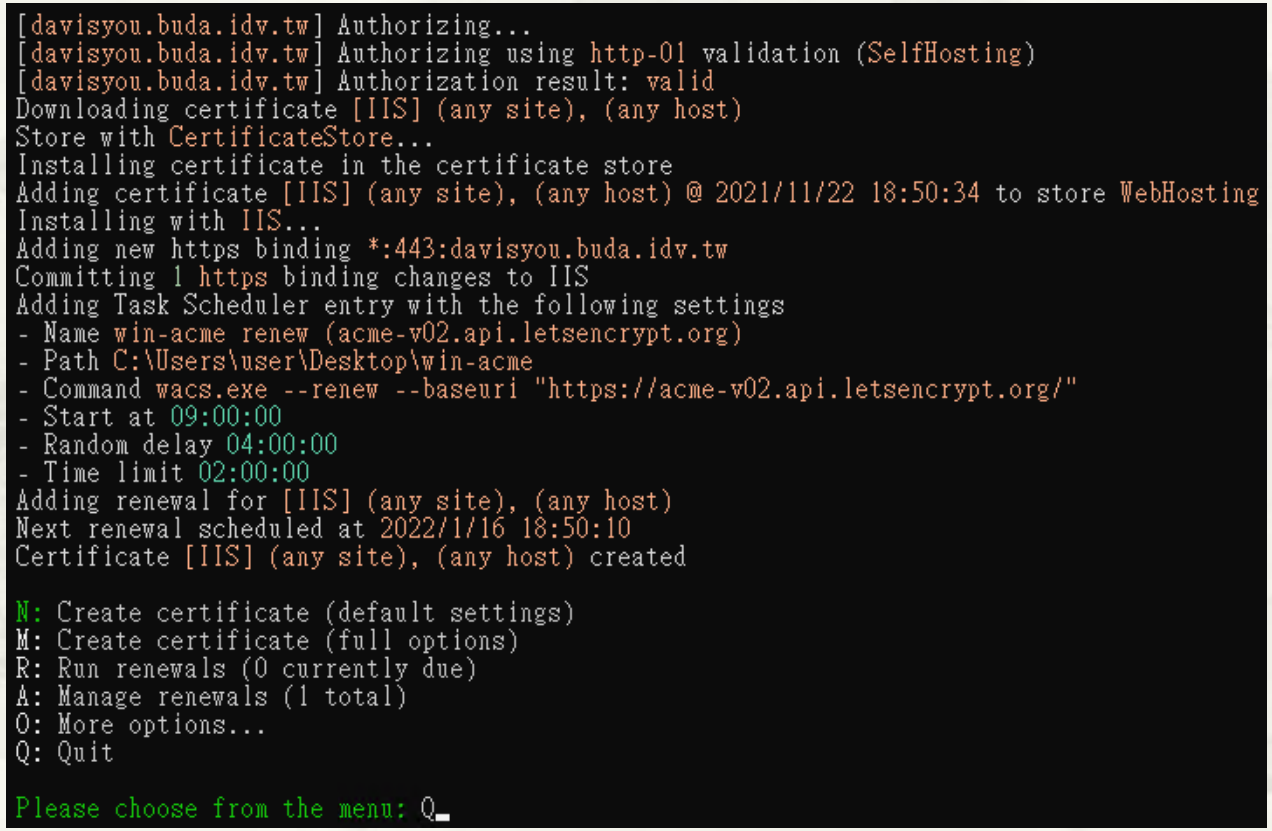
Terms of service:   C:\ProgramData\win-acme\acme-v02.api.letsencrypt.org\LE-SA-v1.2-November-15-2017.pdf

Open in default application? (y/n*) - <Enter>

Do you agree with the terms? (y*/n) - <Enter>

Enter email(s) for notifications about problems and abuse (comma-separated): davisyou@ntu.edu.tw
```

win-acme With IIS



win-acme With IIS

* IIS

Auto Renew

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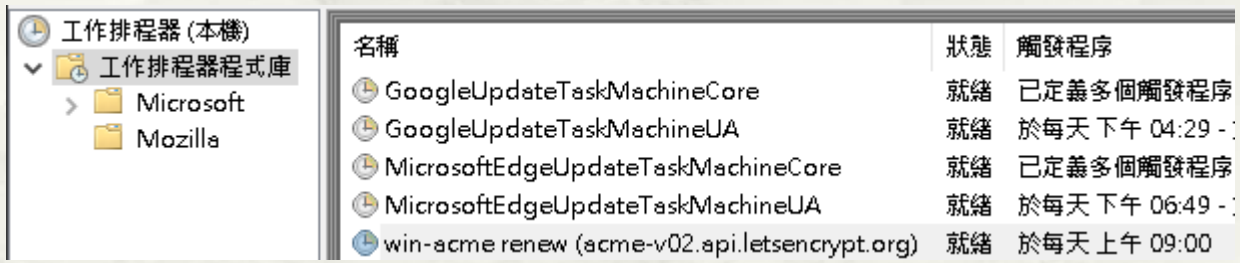

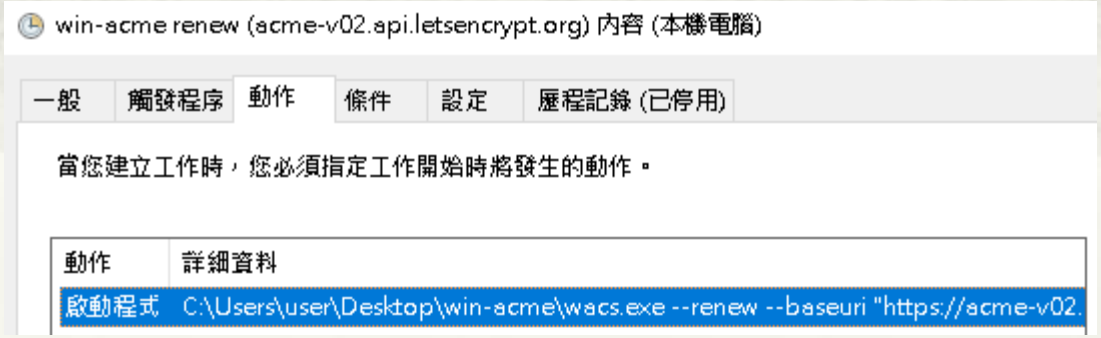

win-acme With IIS Background Steps

* Create .pfx and Import to Windows Cert Store
  * Private Key
  * Server Certificate
* IIS Config
* 工作排程器
  * Auto Renew Job

簡報完畢
謝謝