N-Partner

如何設定
Windows DHCP log

V011

2024/04/16

版權聲明

商標

目錄

前言

本文件描述 N-Reporter 使用者如何使用 Open Source 工具 NXLog 方式設定 Windows DHCP 記錄。NXLog 工具將 Windows DHCP 記錄轉成 syslog，再轉發到 N-Reporter 做正規化、稽核與分析。

此文件適用於作業系統的 Windows Server 2003 / 2008 / 2012 / 2016 / 2019 / 2022 版本。

註：本文件僅做為如何將日誌吐出的設定參考，建議您仍應聯繫設備或是軟體原廠尋求日誌輸出方式之協助。

1. NXLog

1.1 NXLog 安裝

(1) 下載 NXLog CE(Community Edition)

前往網址 https://nxlog.co/products/nxlog-community-edition/download

下載網址最新版 nxlog-ce-x.x.xxxx.msi，範例: nxlog-ce-3.0.2272.msi

	Windows	nxlog-ce-3.0.2272.msi

註：若需要下載 NXLog 32bit 版本，請與我們連繫。

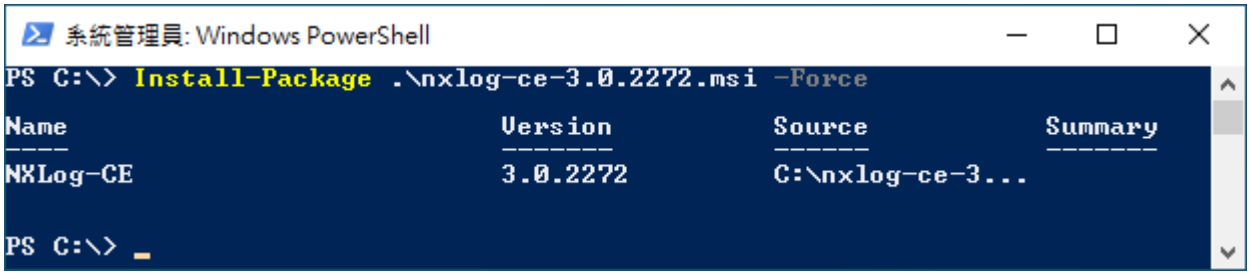
(2) 安裝 NXLog

<2.1> Windows 2008 或之後版本作業系統

<2.1.1> 開啟 [Windows PowerShell]

<2.1.2> 安裝 NXLog 軟體

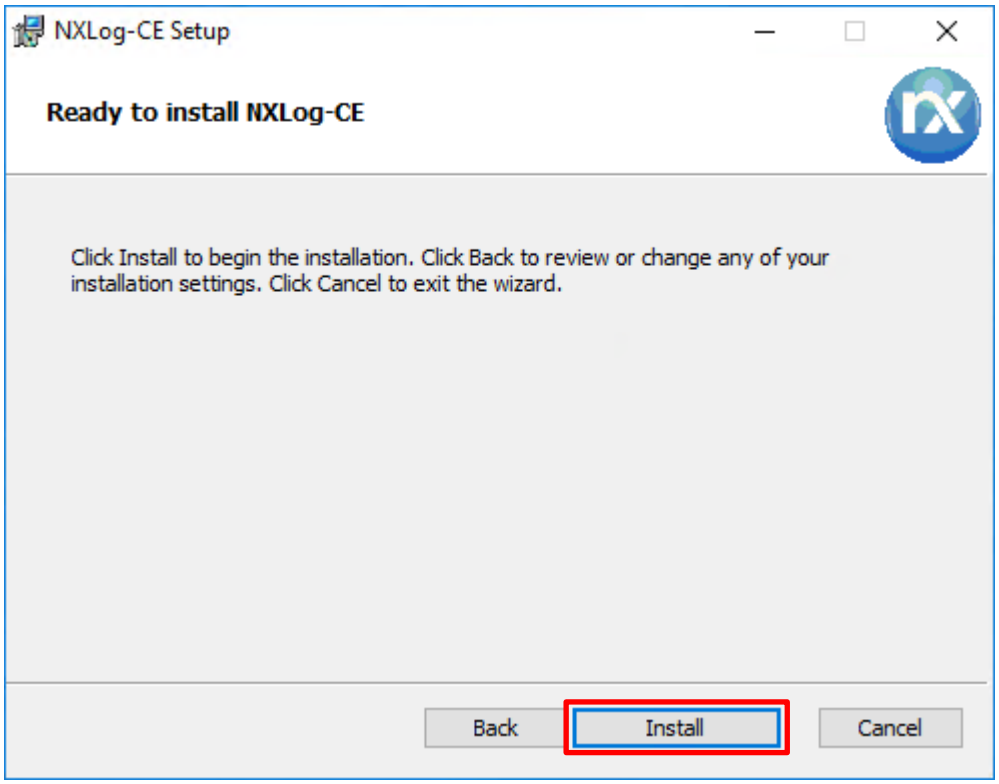
```
PS C:\> Install-Package -Name .\nxlog-ce-3.0.2272.msi -Force
```



紅色文字部位請輸入 NXLog 軟體路徑和檔案

<2.2> Windows 2003

點擊 [nxlog-ce-2.10.2150.msi] -> 按 [Install] 到 [Finish]



1.2 NXLog 設定檔下載

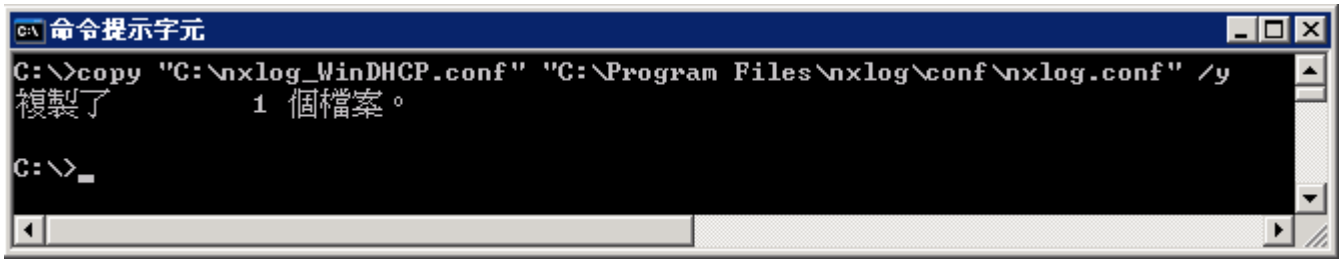
1.2.1 Windows 2003 或之前版本作業系統

(1) 開啟 [命令提示字元]

(2) 下載 NXLog Windows 2003 設定檔 -> 覆蓋 Windows 系統 NXLog 設定檔

下載連結：http://www.npartnertech.com/download/tech/nxlog_WinDHCP.conf

```
C:\ > copy "C:\nxlog_WinDHCP.conf" "C:\Program Files\nxlog\conf\nxlog.conf" /y
```



本文件範例是 32 位元作業系統，若作業系統是 64 位元，紅色文字部位請改以下設定 "C:\Program Files (x86)\nxlog\conf\nxlog.conf"

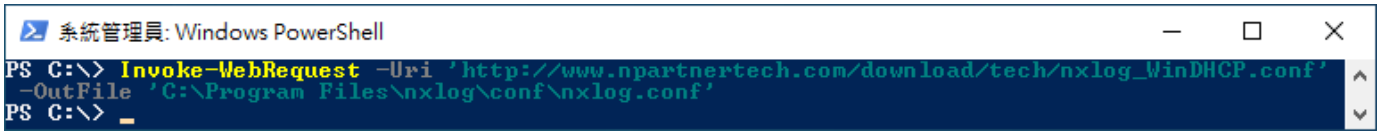
1.2.2 Windows 2008 或之後版本作業系統

(1) 開啟 [Windows PowerShell]

(2) 下載 NXLog DHCP 設定檔並覆蓋 Windows 系統 NXLog 設定檔。

下載連結：http://www.npartnertech.com/download/tech/nxlog_WinDHCP.conf

```
PS C:\> Invoke-WebRequest -Uri 'http://www.npartnertech.com/download/tech/nxlog_WinDHCP.conf' -OutFile
'C:\Program Files\nxlog\conf\nxlog.conf'
```



本文件範例是 NXLog 64bit 版本，若是 NXLog 32bit 版本，紅色文字部位請改以下設定 'C:\Program Files (x86)\nxlog\conf\nxlog.conf'

1.3 NXLog 設定檔

```
## Please set the ROOT to the folder your nxlog was installed into, otherwise it will not start.
define NCloud     192.168.8.4
define DhcpPath C:\Windows\System32\LogFiles\DHCP
define ROOT       C:\Program Files\nxlog
define CERTDIR    %ROOT%\cert
define CONFDIR    %ROOT%\conf
define LOGDIR     %ROOT%\data
define LOGFILE    %LOGDIR%\nxlog.log
LogFile %LOGFILE%

Moduledir %ROOT%\modules
CacheDir    %ROOT%\data
Pidfile     %ROOT%\data\nxlog.pid

## Load the modules needed by the outputs
<Extension syslog>
   Module     xm_syslog
</Extension>

## For DHCP log file use the following:
<Input in_dhcplog>
   Module           im_file
   File             '%DhcpPath%\Dhcp*.log'
   SavePos          TRUE
   ReadFromLast TRUE
</Input>

<Output out_dhcplog>
   Module om_udp
   Host     %NCloud%
   Port     514
   Exec     $SyslogFacilityValue = 20;
   Exec     to_syslog_bsd();
</Output>

<Route dhcplog>
   Path    in_dhcplog => out_dhcplog
</Route>
```

藍色文字部位請輸入 N-Reporter 系統 IP address

```
define NCloud     192.168.8.4
```

本文件範例環境為 64bit 作業系統，若作業系統環境為 32bit 請改為以下設定

```
define ROOT       C:\Program Files (x86)\nxlog
```

若 NXLog 無法讀取 System32 資料夾路徑時，請輸入 Sysnative，Sysnative 是重定向資料夾

```
define ROOT       C:\Windows\Sysnative\LogFiles\DHCP
```

藍色文字部位請輸入 DHCP 檔名

```
   File             '%DhcpPath%\Dhcp*.log'
```

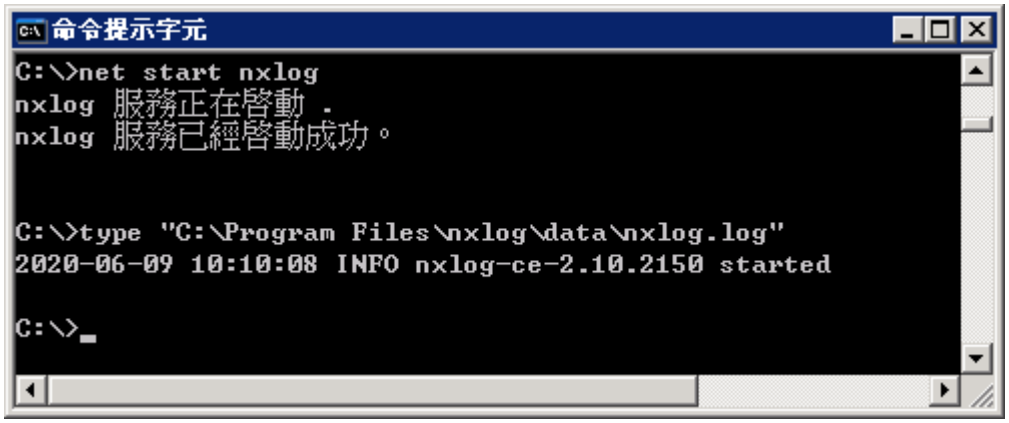
1.4 NXLog 啟動服務

1.4.1 Windows 2003 或之前版本作業系統

(1) 開啟 [命令提示字元]

(2) 啟動 NXLog 服務和確認 NXLog 沒有錯誤訊息

```
C:\> net start nxlog
C:\> type "C:\Program Files\nxlog\data\nxlog.log"
```

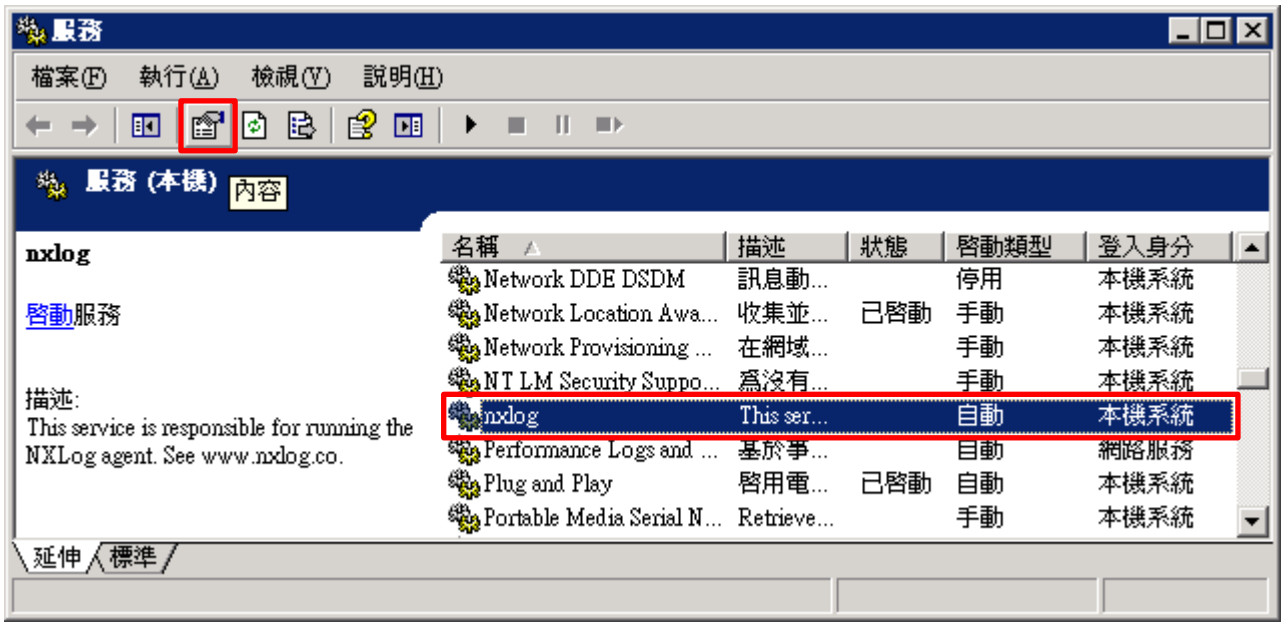


(3) 開啟 [服務] 功能

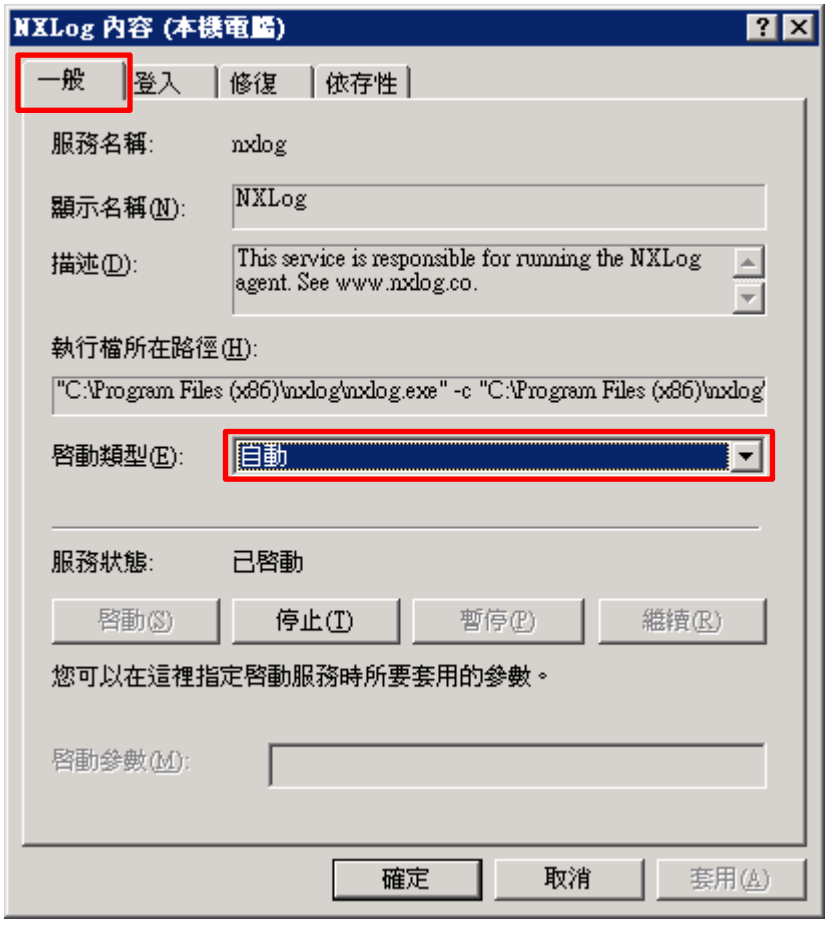
```
C:\> Services.msc
```

(4) 開啟 NXLog 服務內容

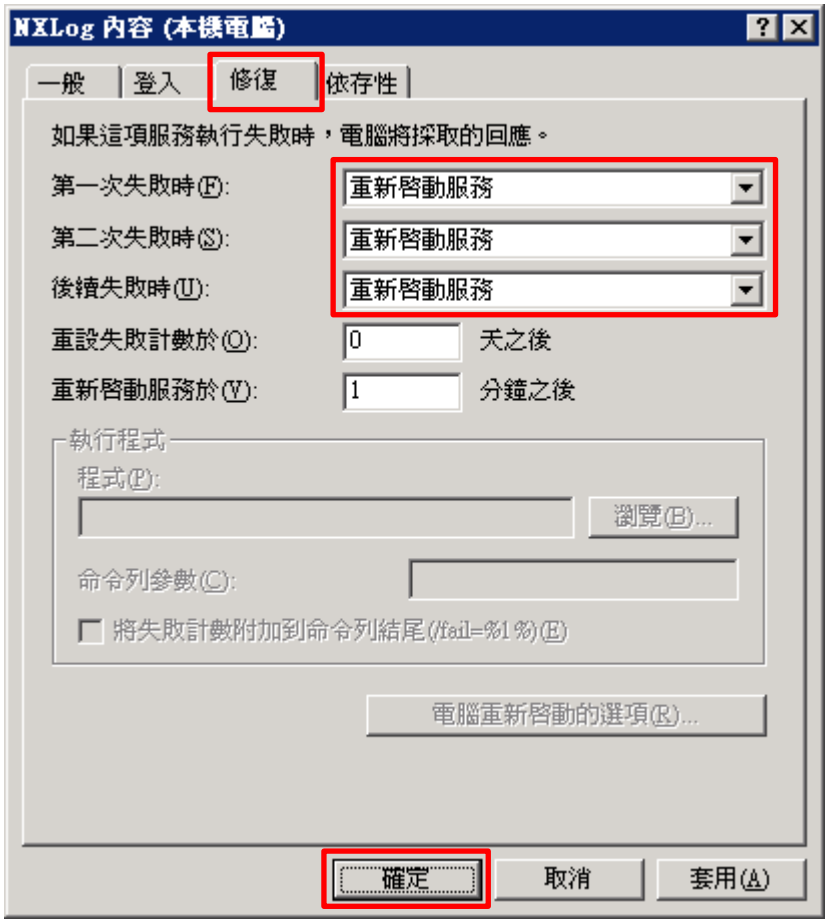
選擇 [nxlog] -> 點選  [內容]



(5) [一般] 頁面 -> 確認；啟動類型: [自動]



(6) [修復] 頁面 -> 確認；第一次失敗時: 和 第二次失敗時: 和 後續失敗時: [重新啟動服務] -> 按 [確定]

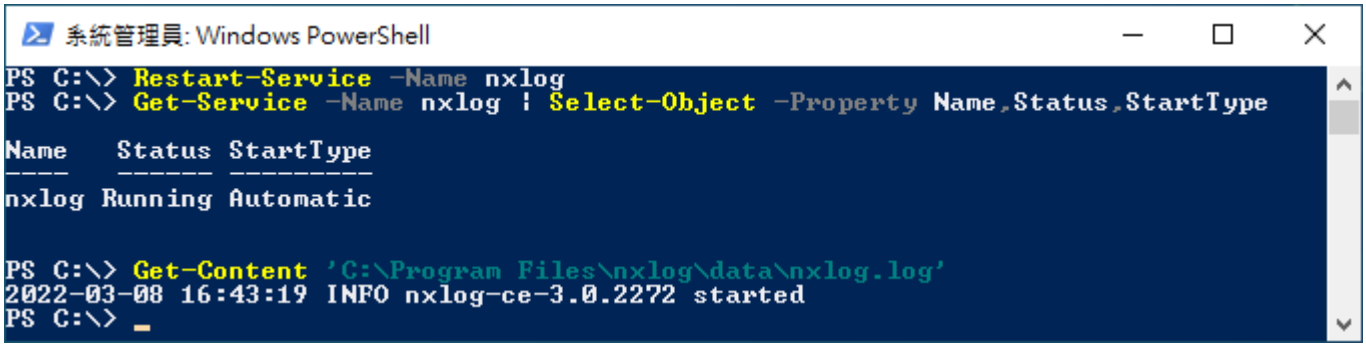


1.4.2 Windows 2008 或之後版本作業系統

(1) 開啟 [Windows PowerShell]

(2) 重新啟動 NXLog 服務，檢查 NXLog 服務和確認 NXLog 沒有錯誤訊息

```
PS C:\> Restart-Service -Name nxlog
PS C:\> Get-Service -Name nxlog | Select-Object -Property Name,Status,StartType
PS C:\> Get-Content 'C:\Program Files\nxlog\data\nxlog.log'
```

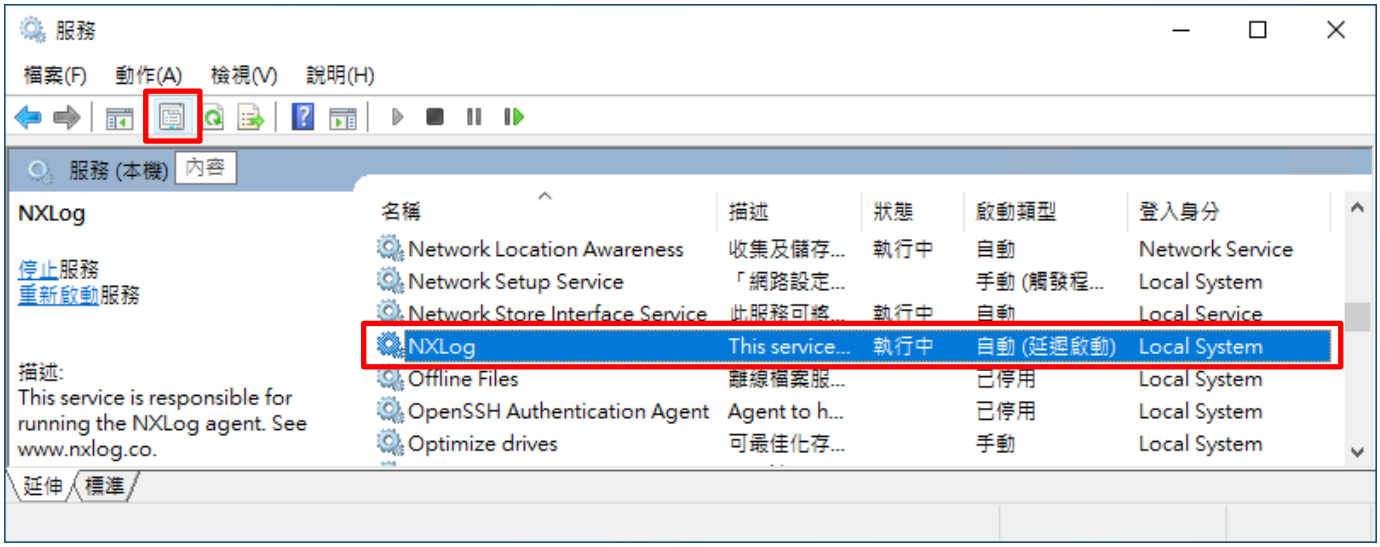


(3) 開啟 [服務] 功能

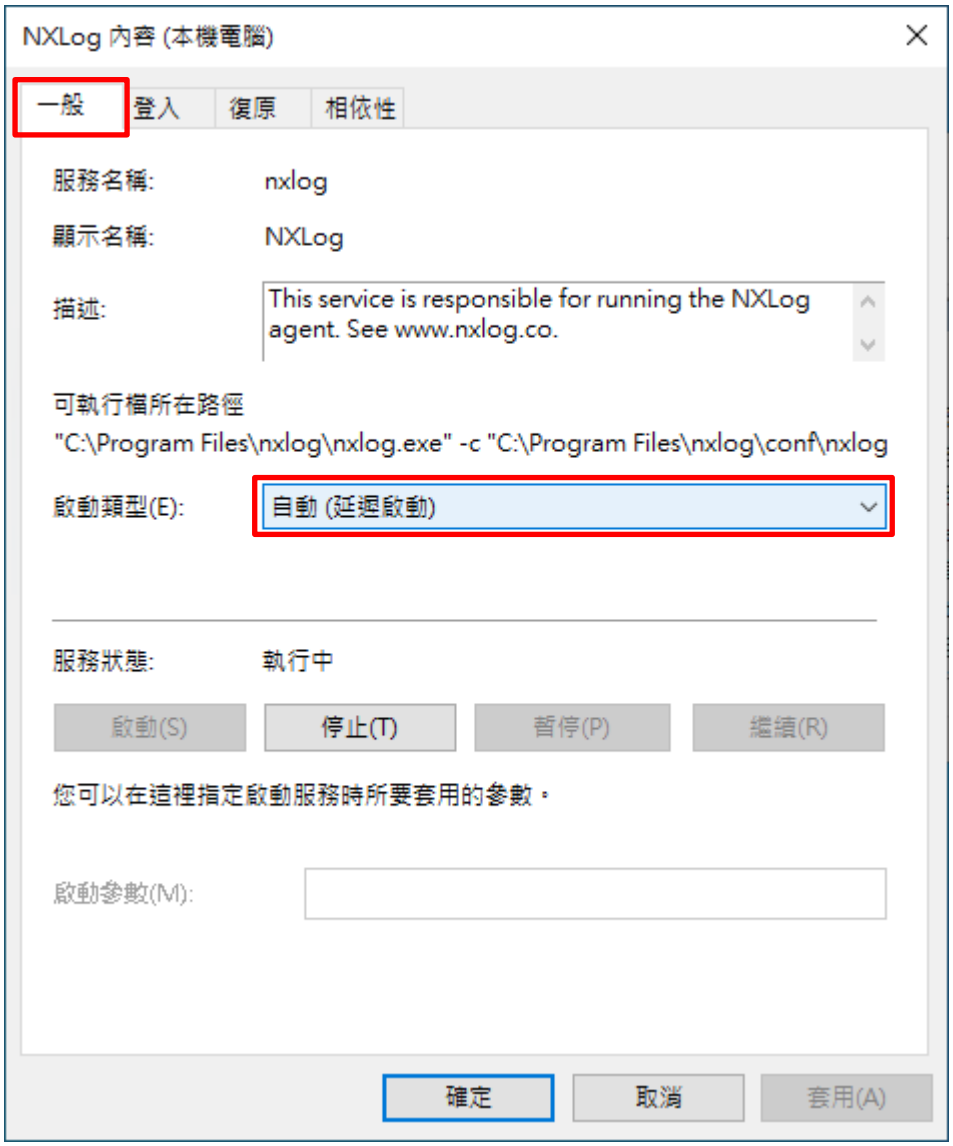
```
PS C:\> Services.msc
```

(4) 開啟 NXLog 服務內容

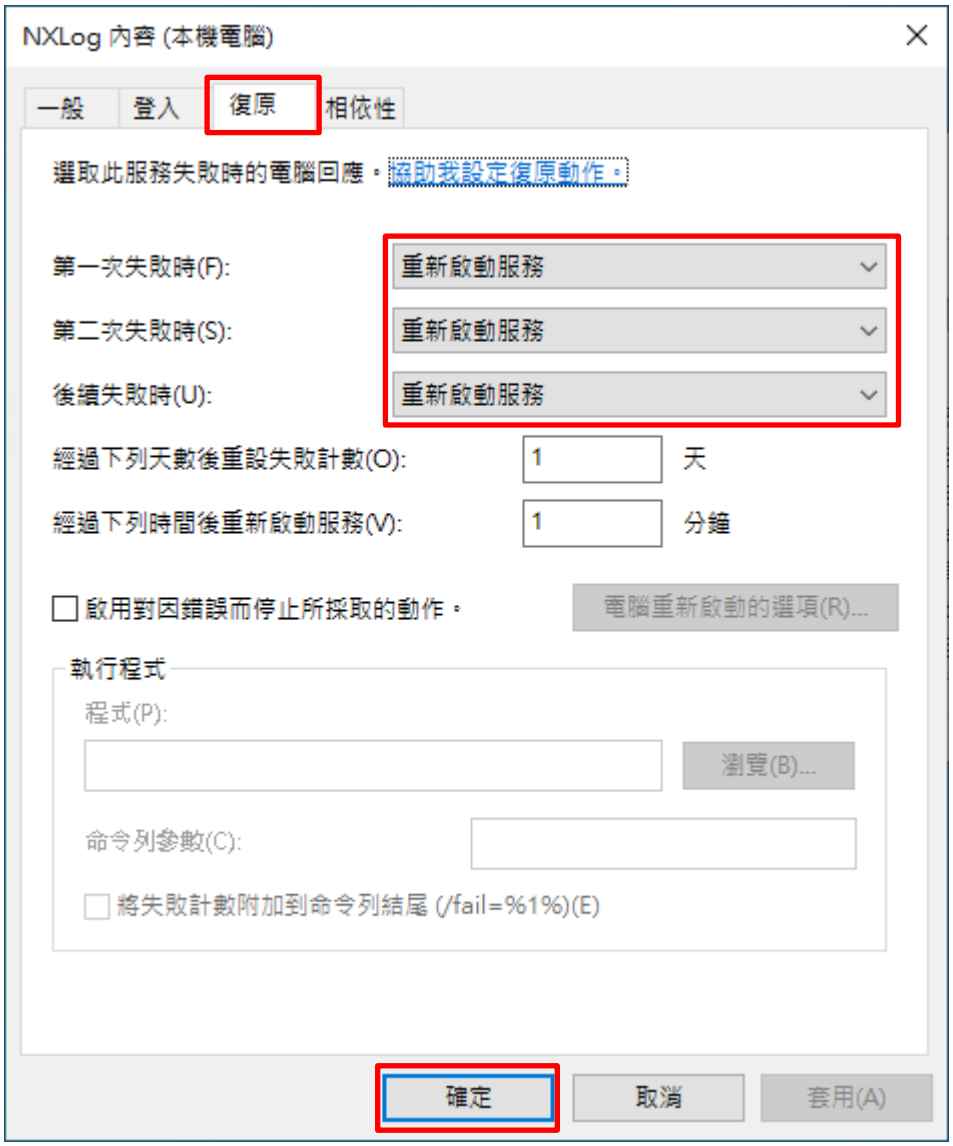
選擇 [NXLog] -> 點選  [內容]



(5) [一般] 頁面 -> 確認；啟動類型: [自動 (延遲啟動)]



(6) [復原] 頁面 -> 確認；第一次失敗時: 和 第二次失敗時: 和 後續失敗時: [重新啟動服務] -> 按 [確定]

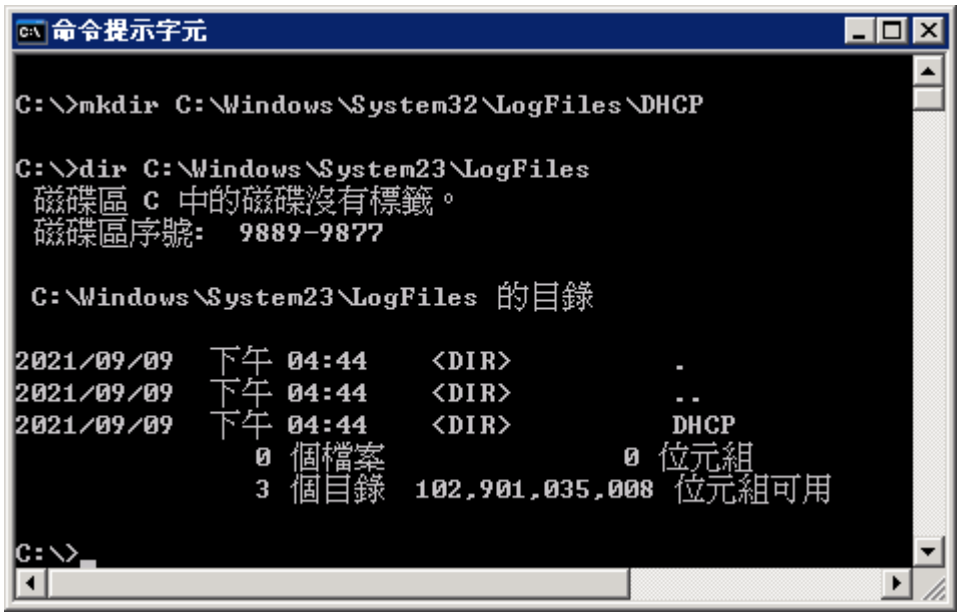


2. Windows 2003

(1) 開啟 [命令提示字元]

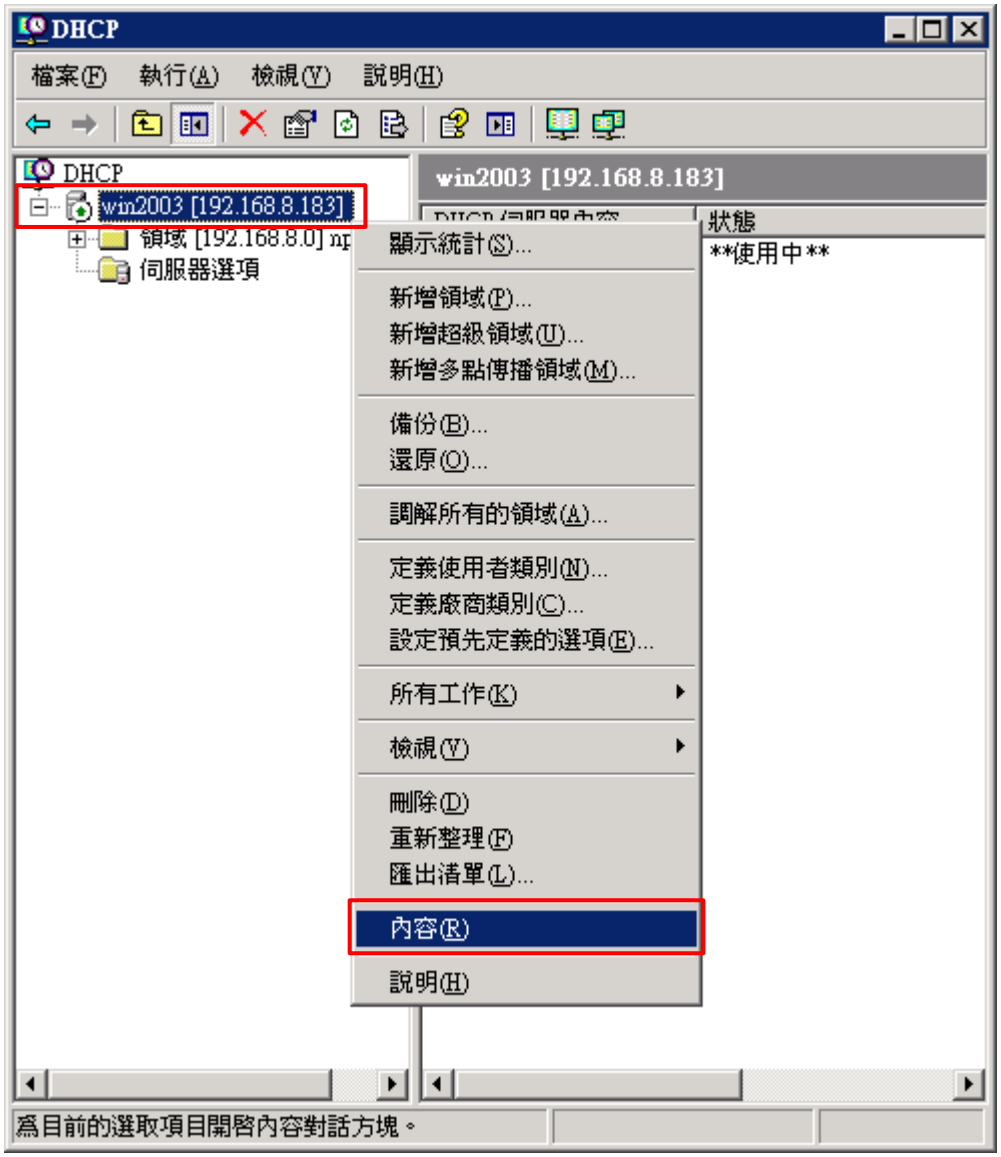
(2) 新增 DHCP log 資料夾

```
PS C:\> mkdir C:\Windows\System32\LogFiles\DHCP
PS C:\> dir C:\Windows\System32\LogFiles
```

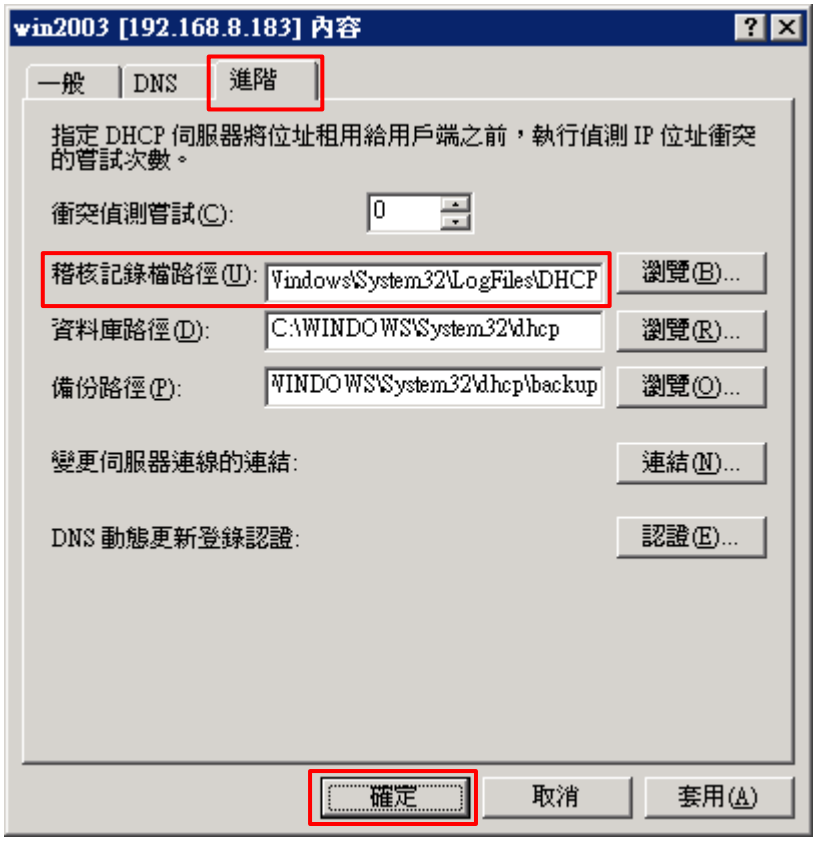


(3) 開啟 [DHCP]

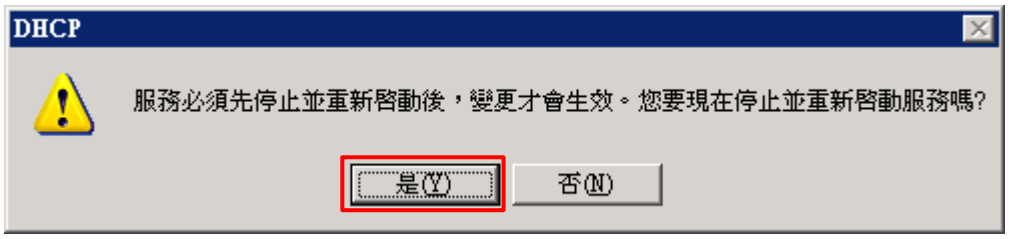
(4) 在 [DHCP 伺服器] 上按滑鼠右鍵 -> 選擇 [內容]



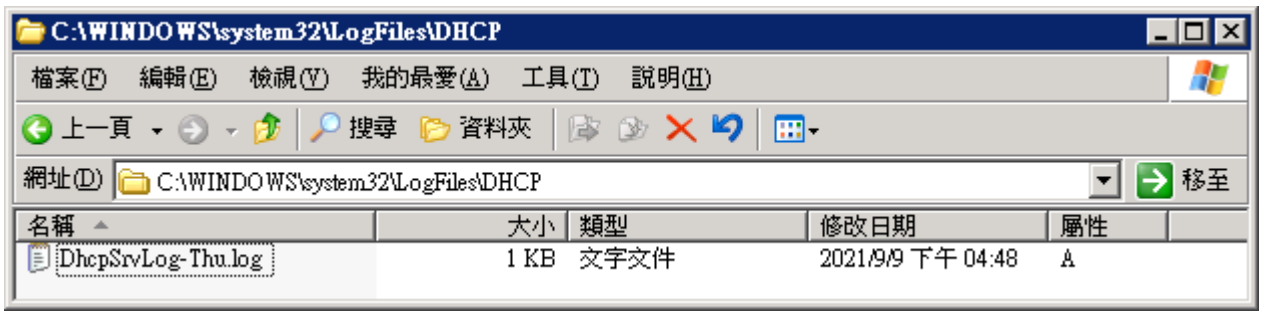
(5) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]



(6) 按 [是] (重啟 DHCP server 服務)



(7) 確認有產生 DHCP.log 檔案

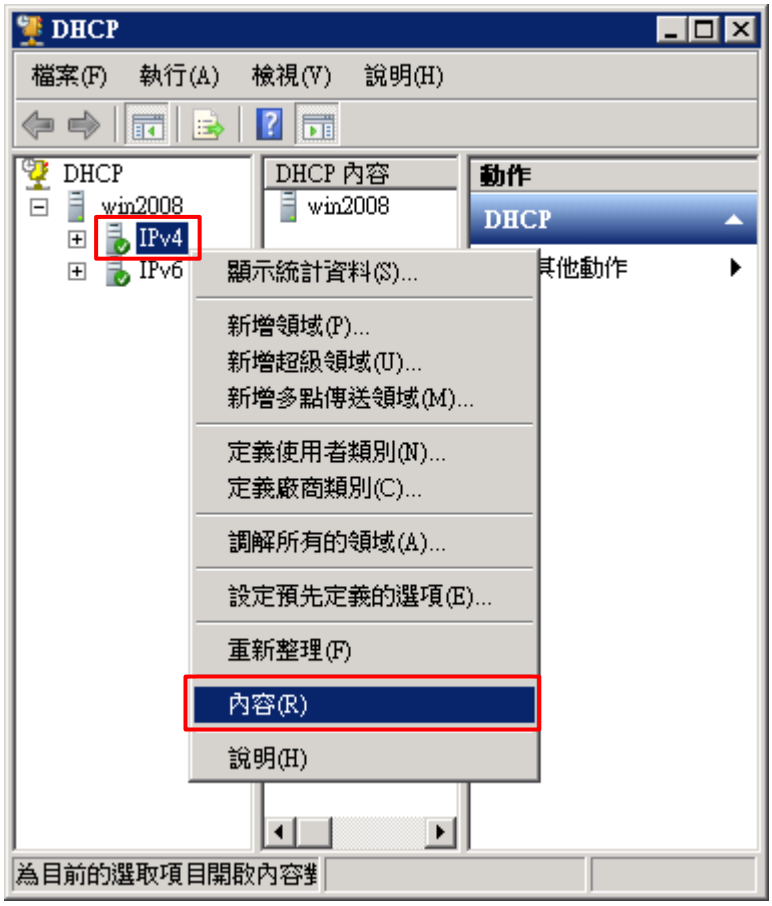


3. Windows 2008

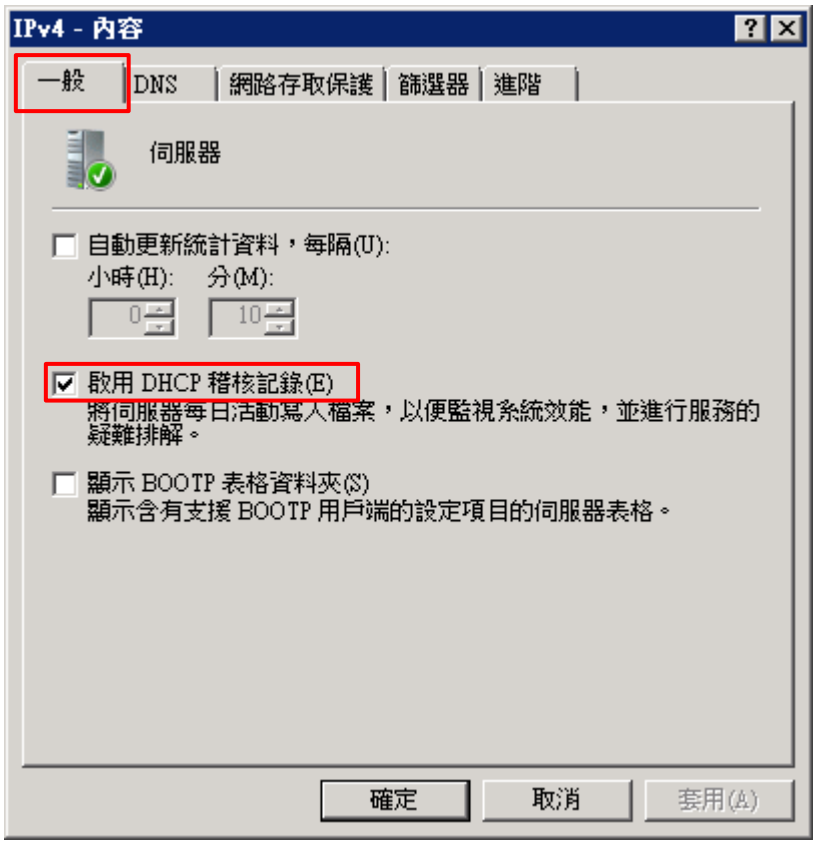
3.1 DHCP IPv4

(1) 開啟 [DHCP]

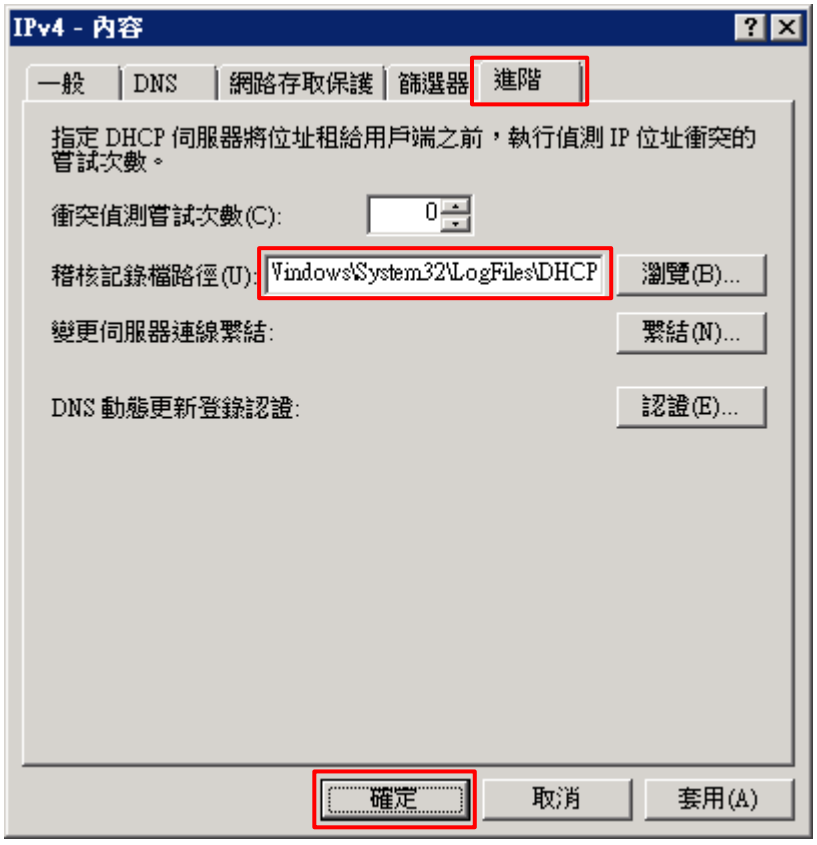
(2) 在 [IPv4] 按滑鼠右鍵 -> 選擇 [內容]



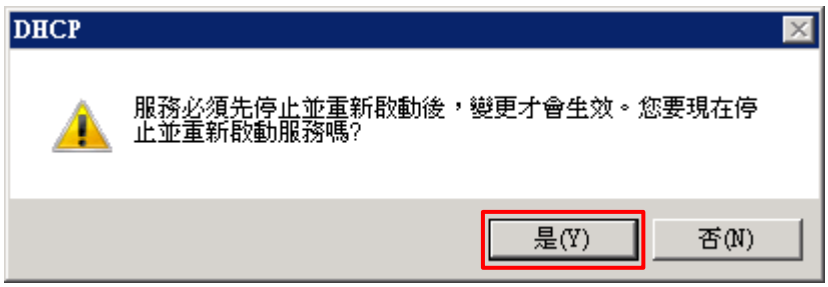
(3) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



(4) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]

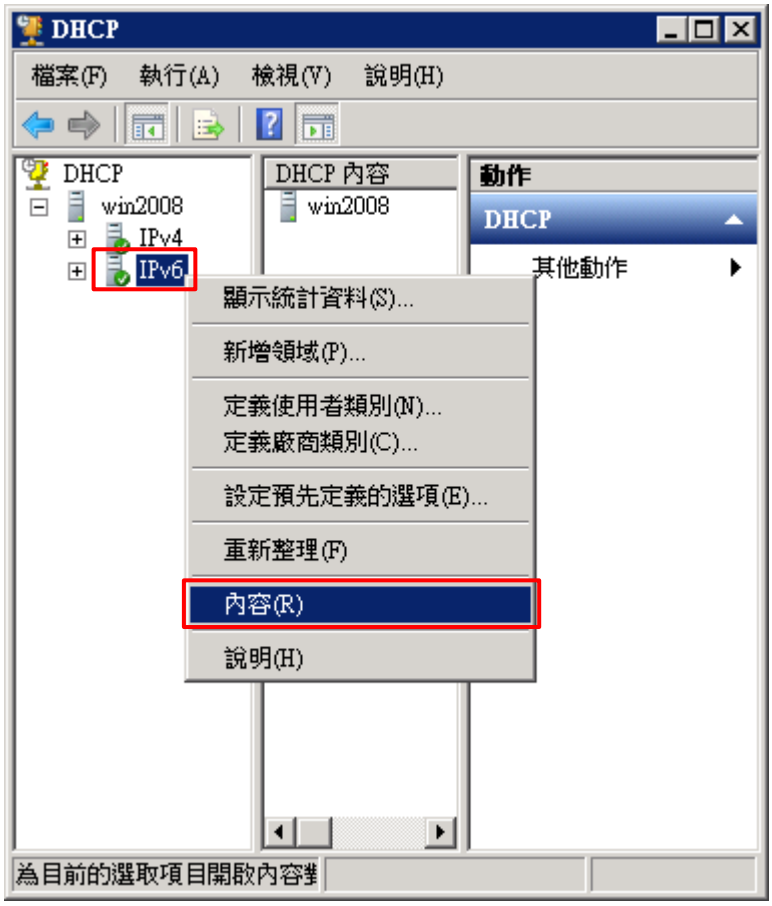


(5) 按 [是] (重啟 DHCP server 服務)

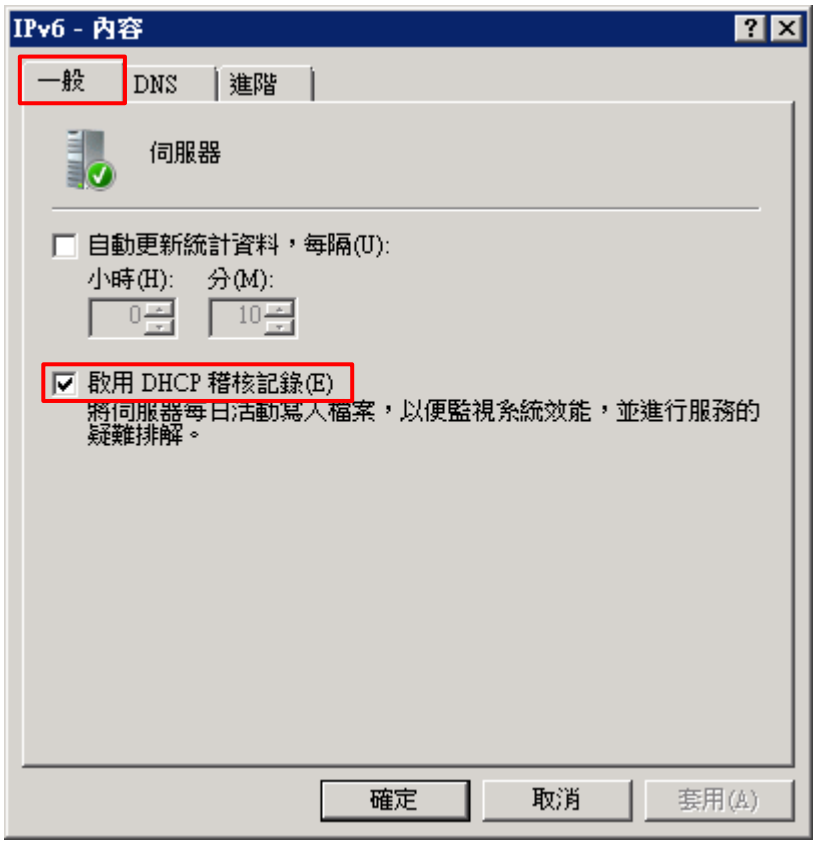


3.2 DHCP IPv6

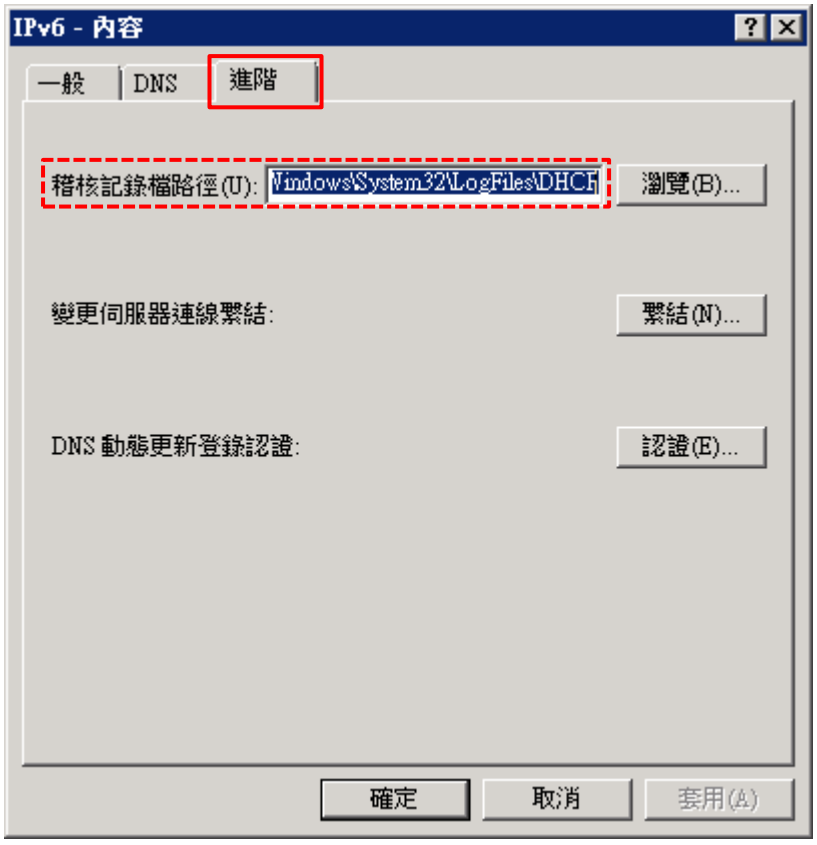
(1) 在 [IPv6] 按滑鼠右鍵 -> 選擇 [內容]



(2) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



(3) [進階] 頁面 -> 確認稽核記錄檔路徑: [C:\Windows\System32\LogFiles\DHCP]

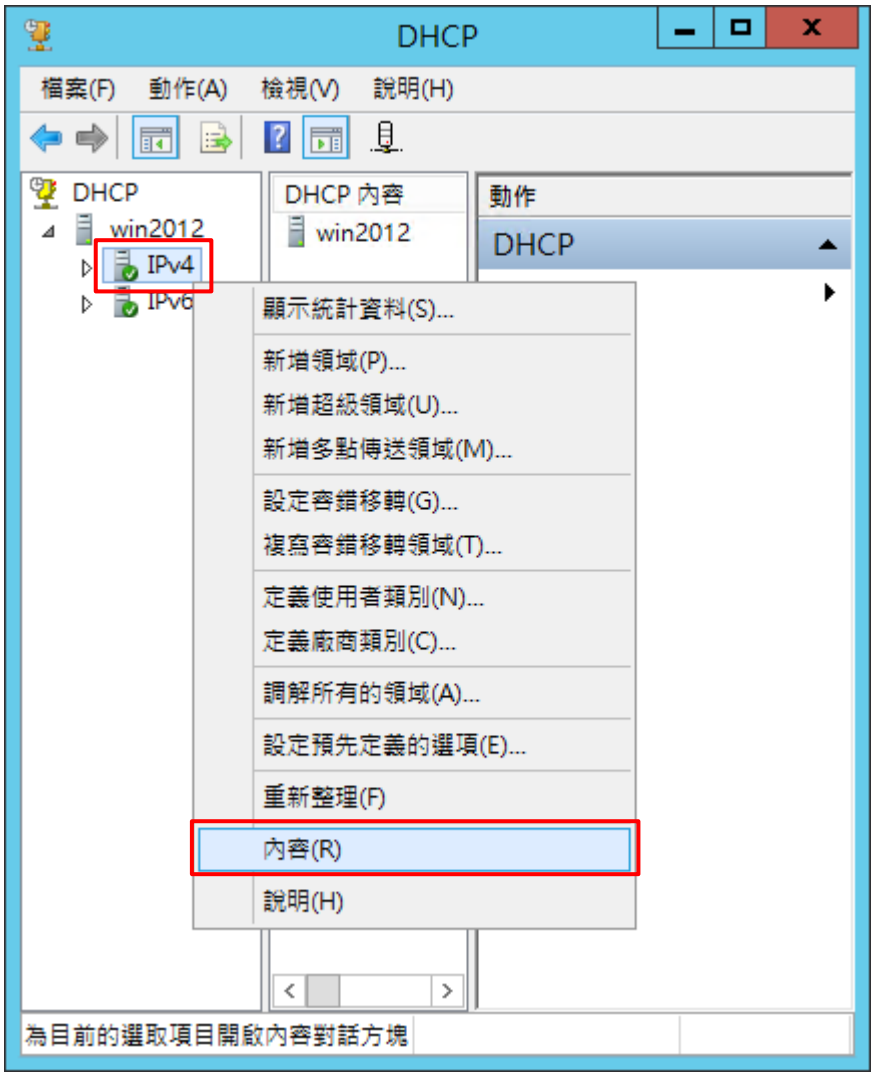


4 Windows 2012

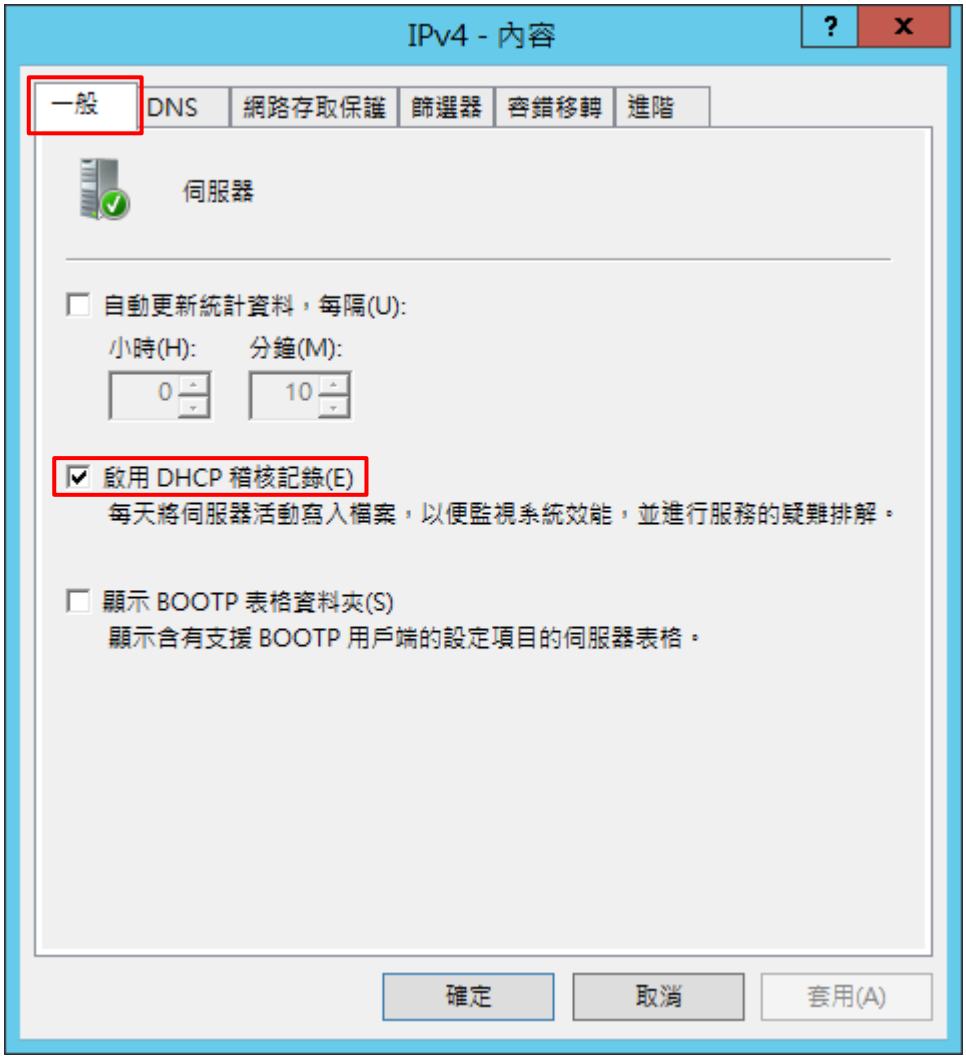
4.1 DHCP IPv4

(1) 開啟 [DHCP]

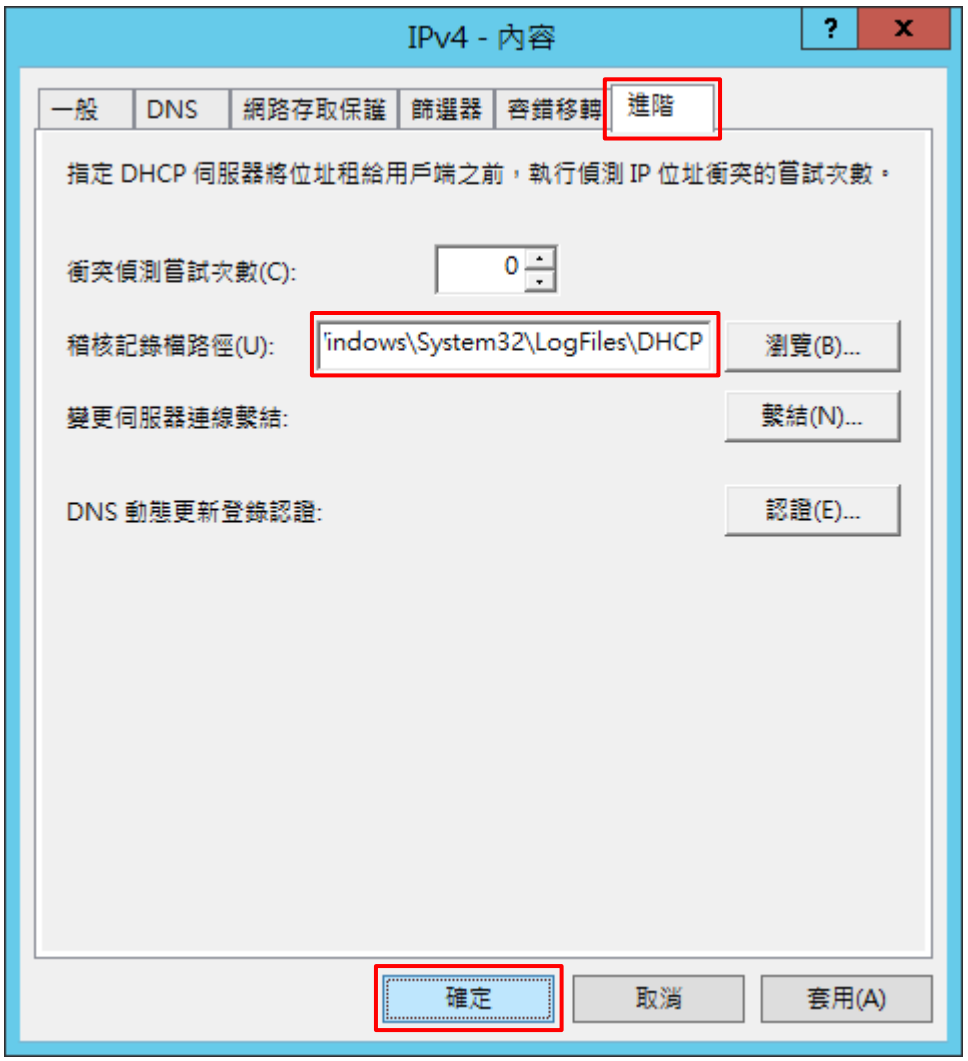
(2) 在 [IPv4] 按滑鼠右鍵 -> 選擇 [內容]



(3) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



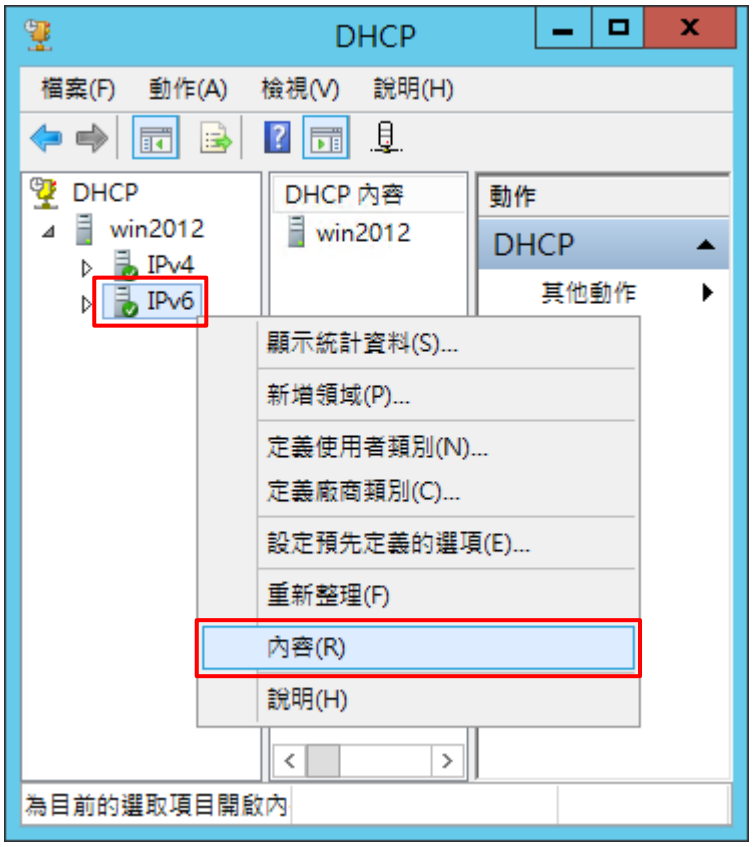
(4) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]



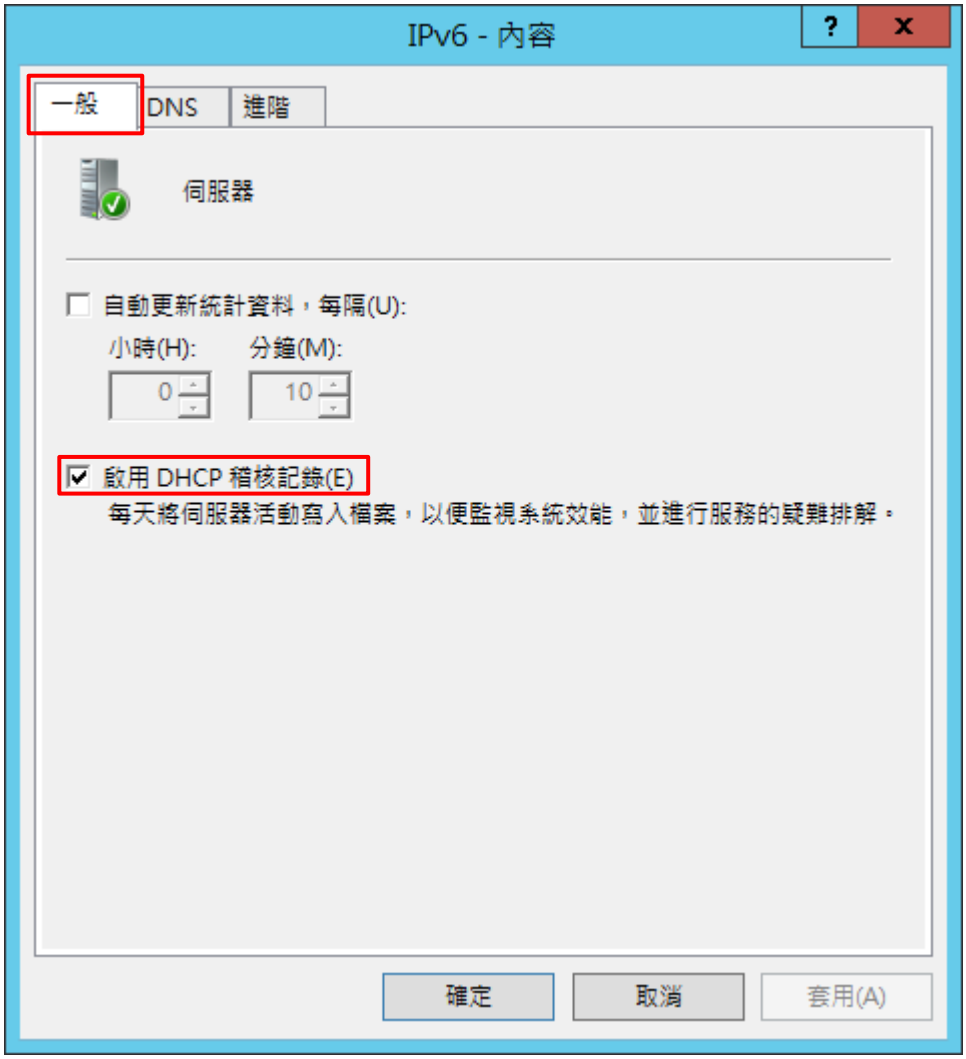
(5) 按 [是] (重啟 DHCP server 服務)

4.2 DHCP IPv6

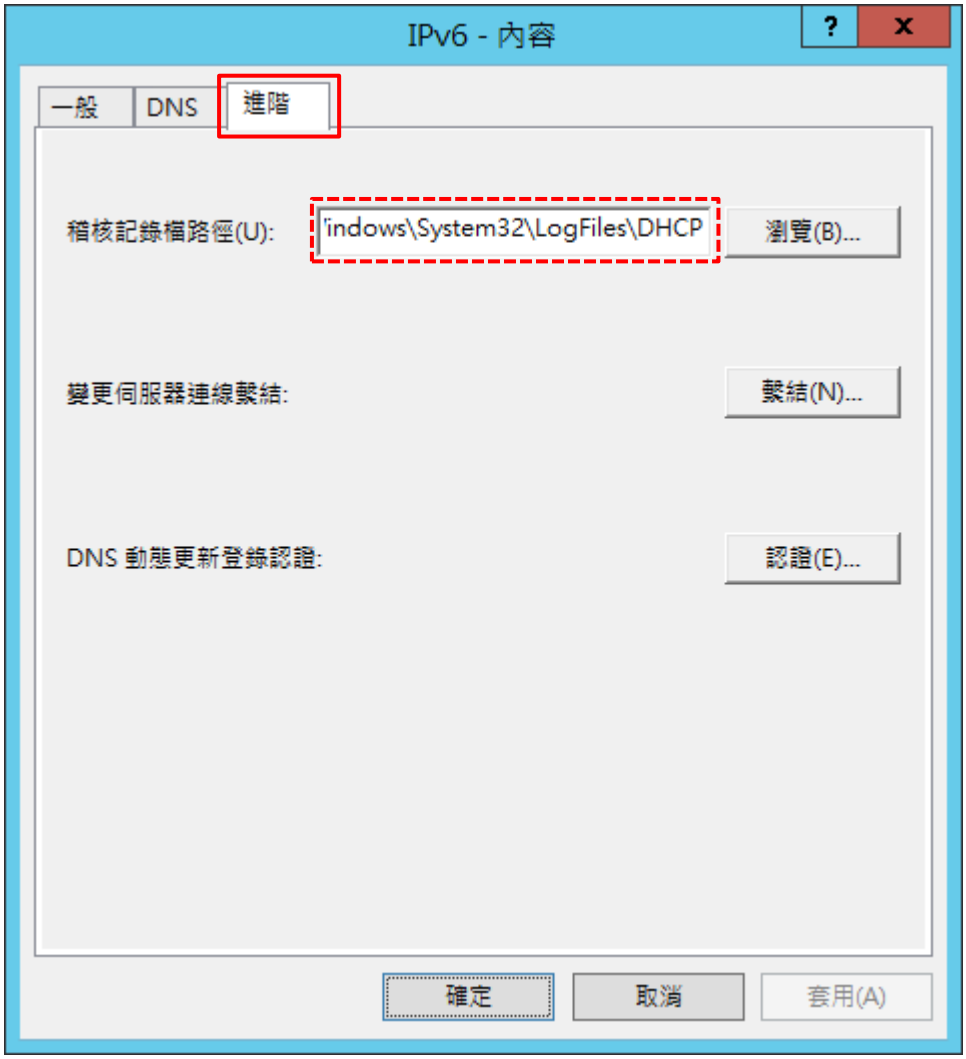
(1) 在 [IPv6] 按滑鼠右鍵 -> 選擇 [內容]



(2) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



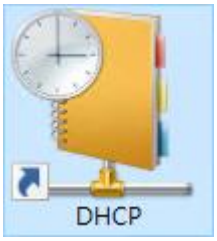
(3) [進階] 頁面 -> 確認稽核記錄檔路徑: [C:\Windows\System32\LogFiles\DHCP]



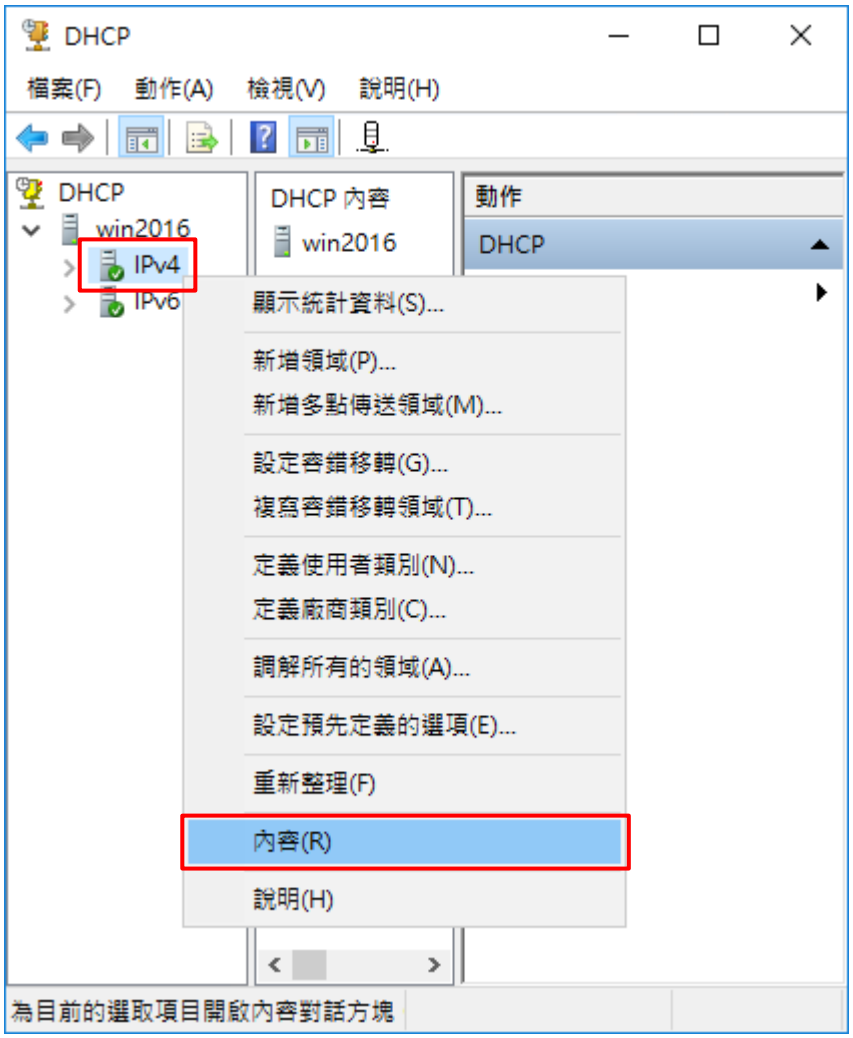
5. Windows 2016

5.1 DHCP IPv4

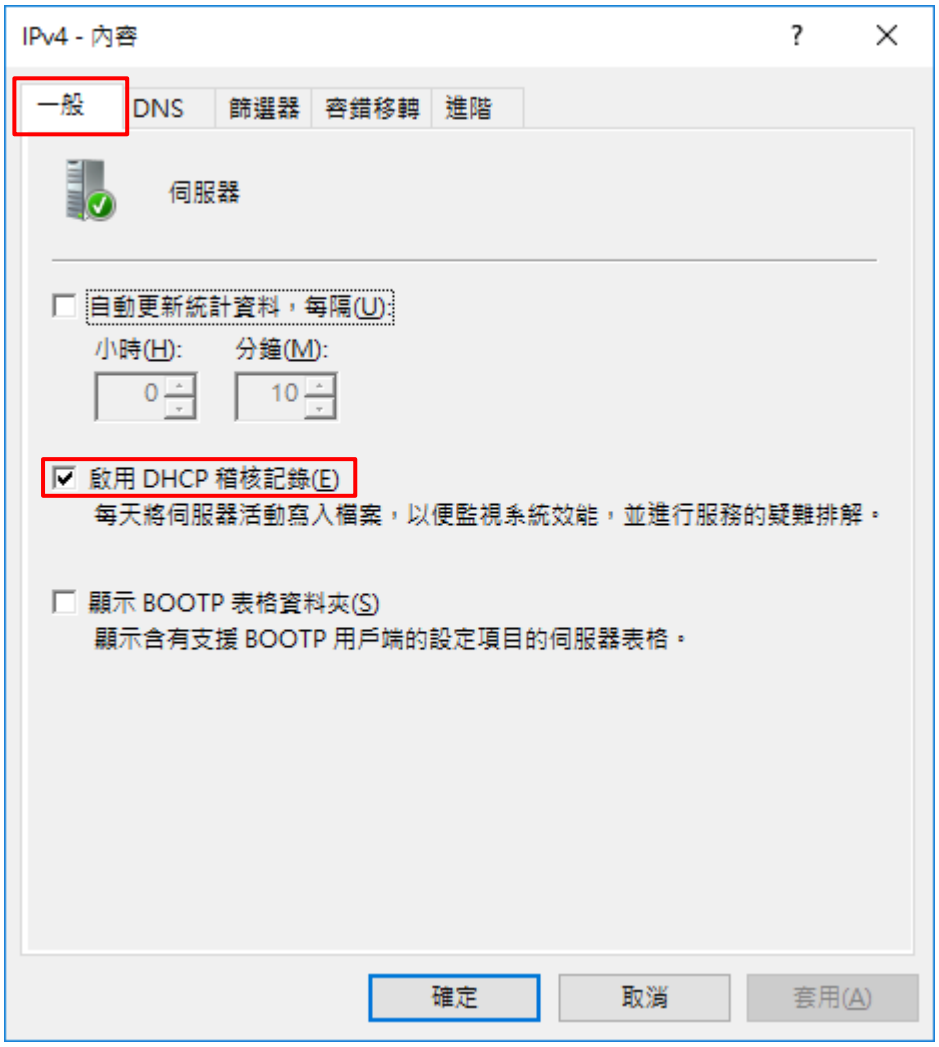
(1) 開啟 [DHCP]



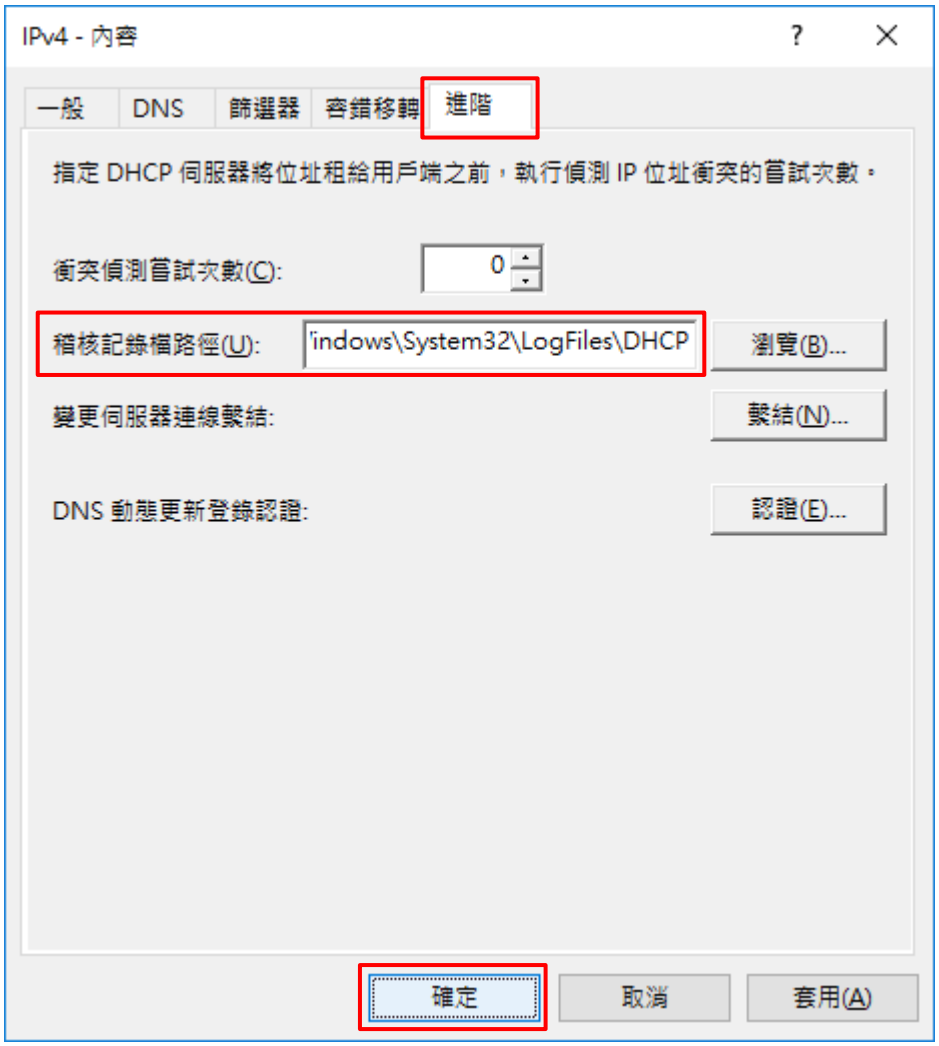
(2) 在 [IPv4] 按滑鼠右鍵 -> 選擇 [內容]



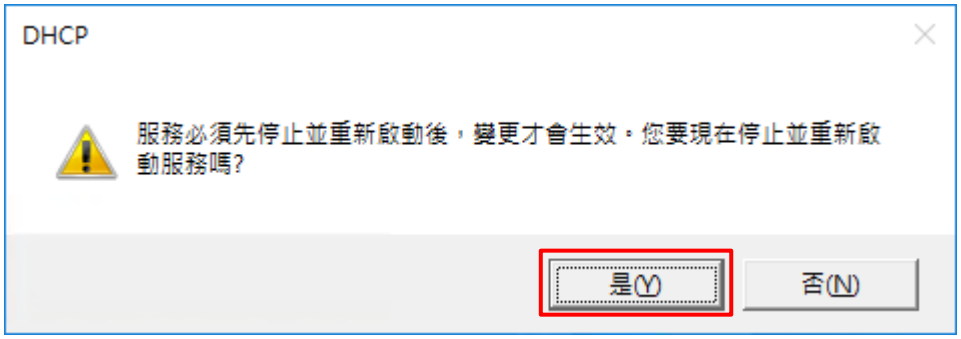
(3) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



(4) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]

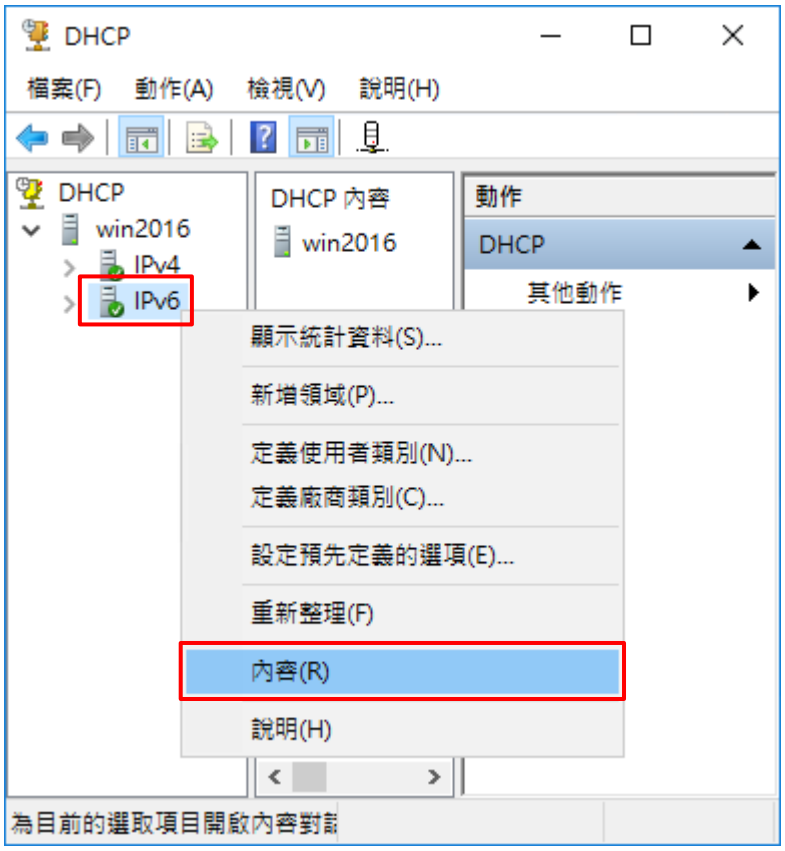


(5) 按 [是] (重啟 DHCP server 服務)

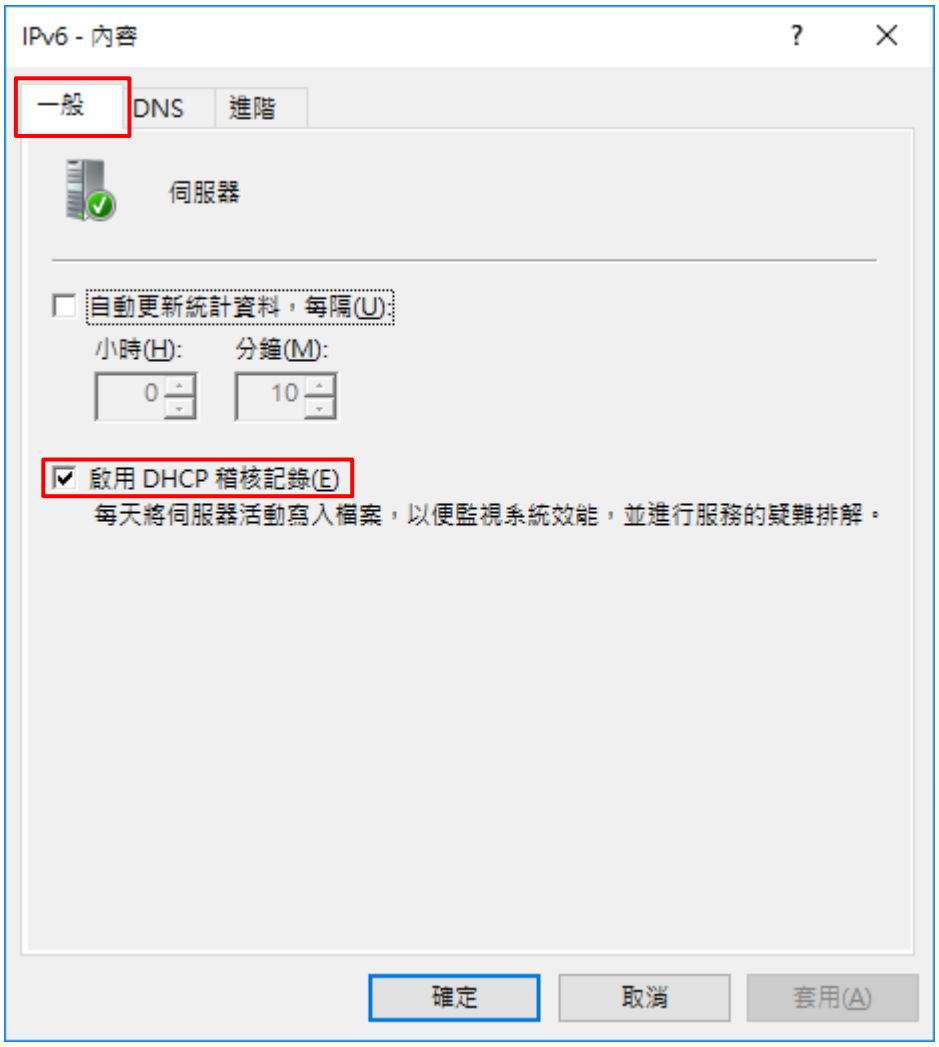


5.2 DHCP IPv6

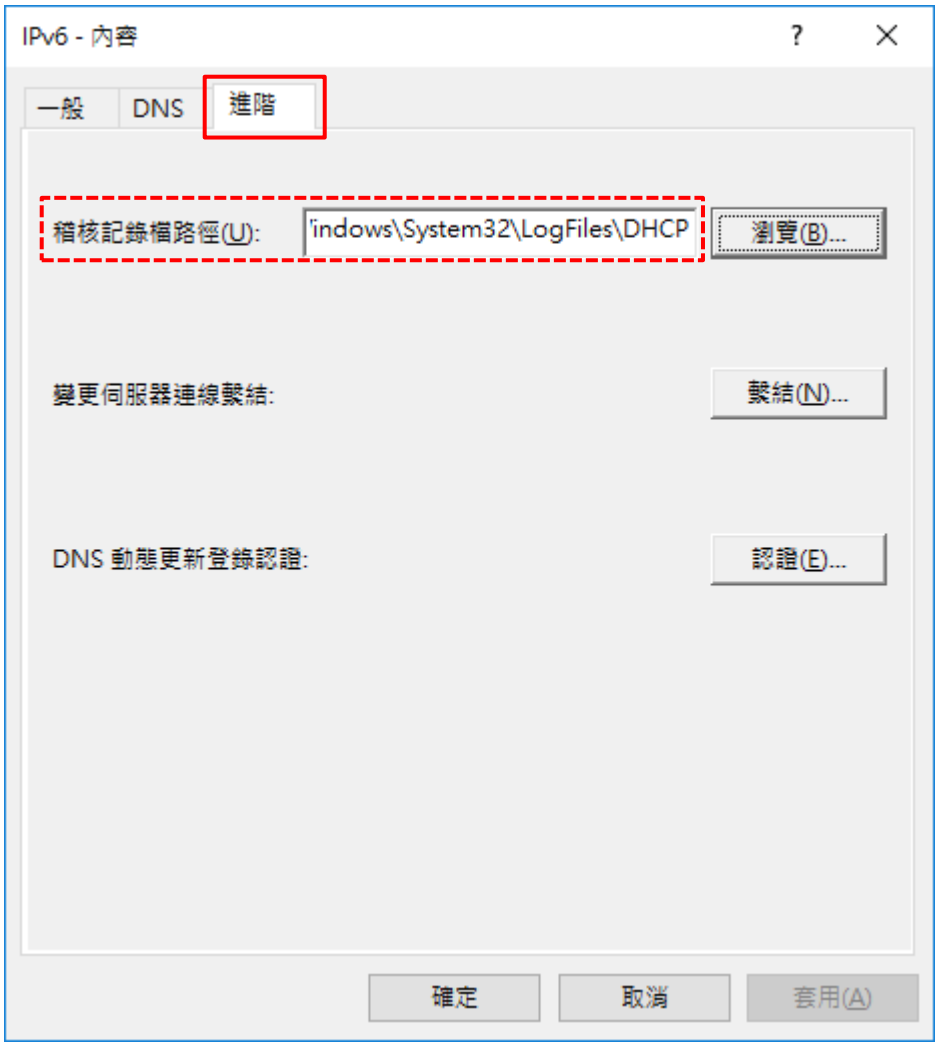
(1) 在 [IPv6] 按滑鼠右鍵 -> 選擇 [內容]



(2) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



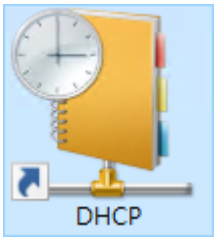
(3) [進階] 頁面 -> 確認稽核記錄檔路徑: [C:\Windows\System32\LogFiles\DHCP]



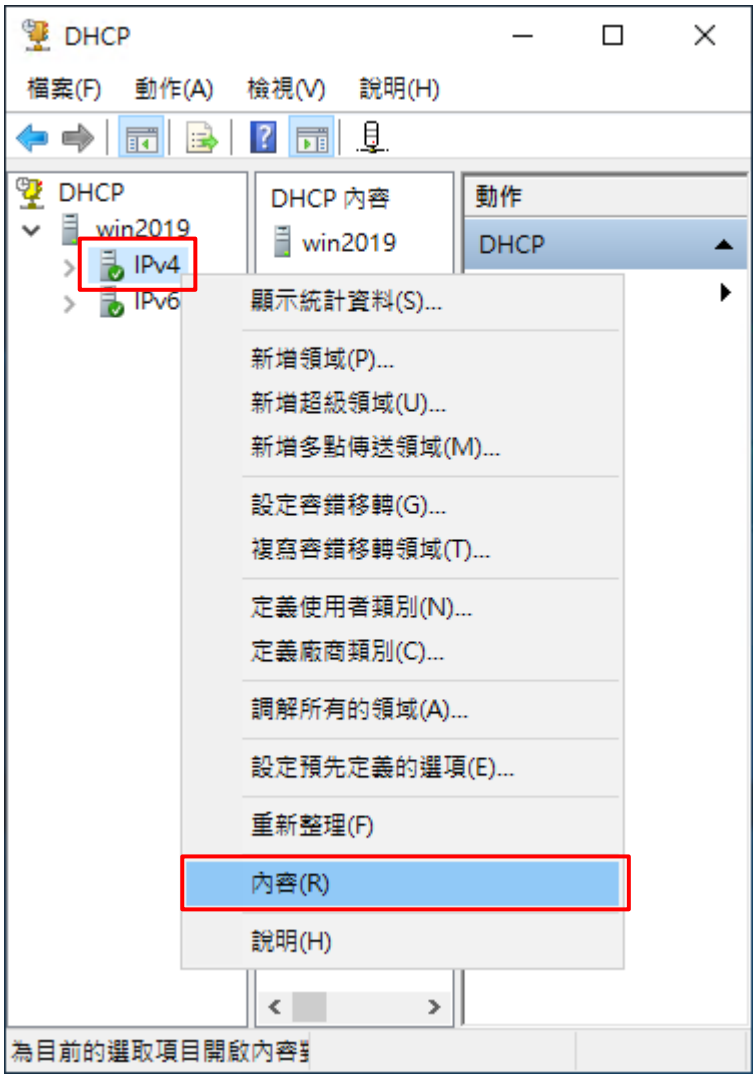
6. Windows 2019

6.1 DHCP IPv4

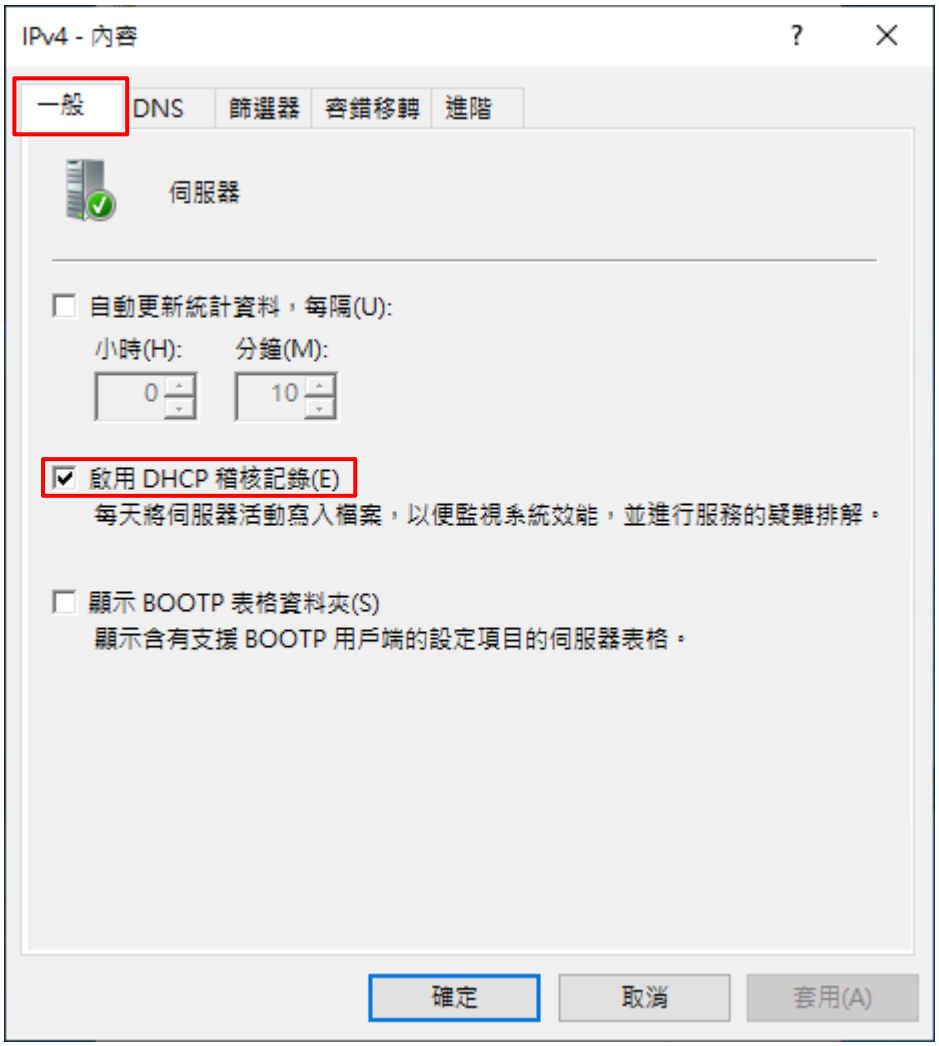
(1) 開啟 [DHCP]



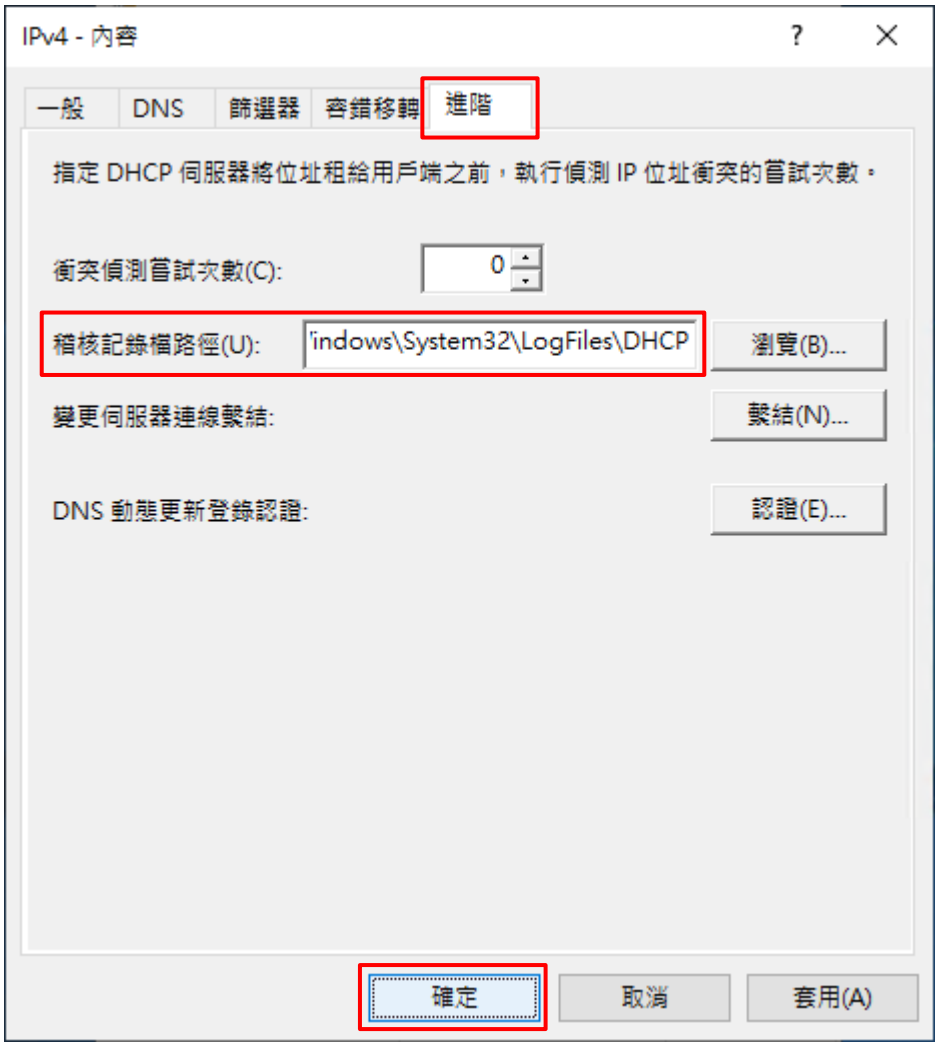
(2) 在 [IPv4] 按滑鼠右鍵 -> 選擇 [內容]



(3) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



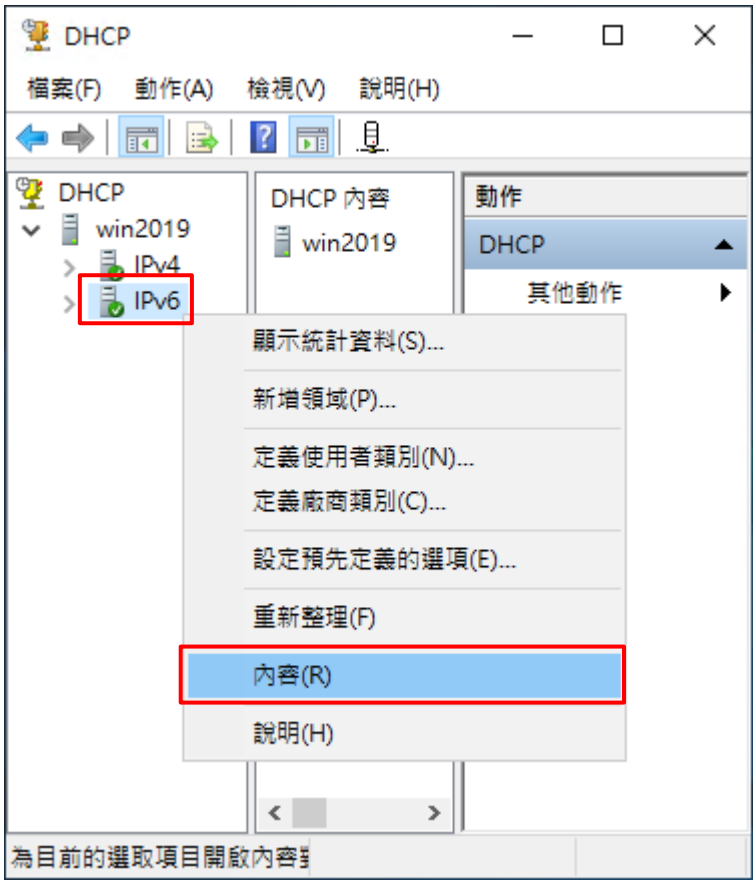
(4) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]



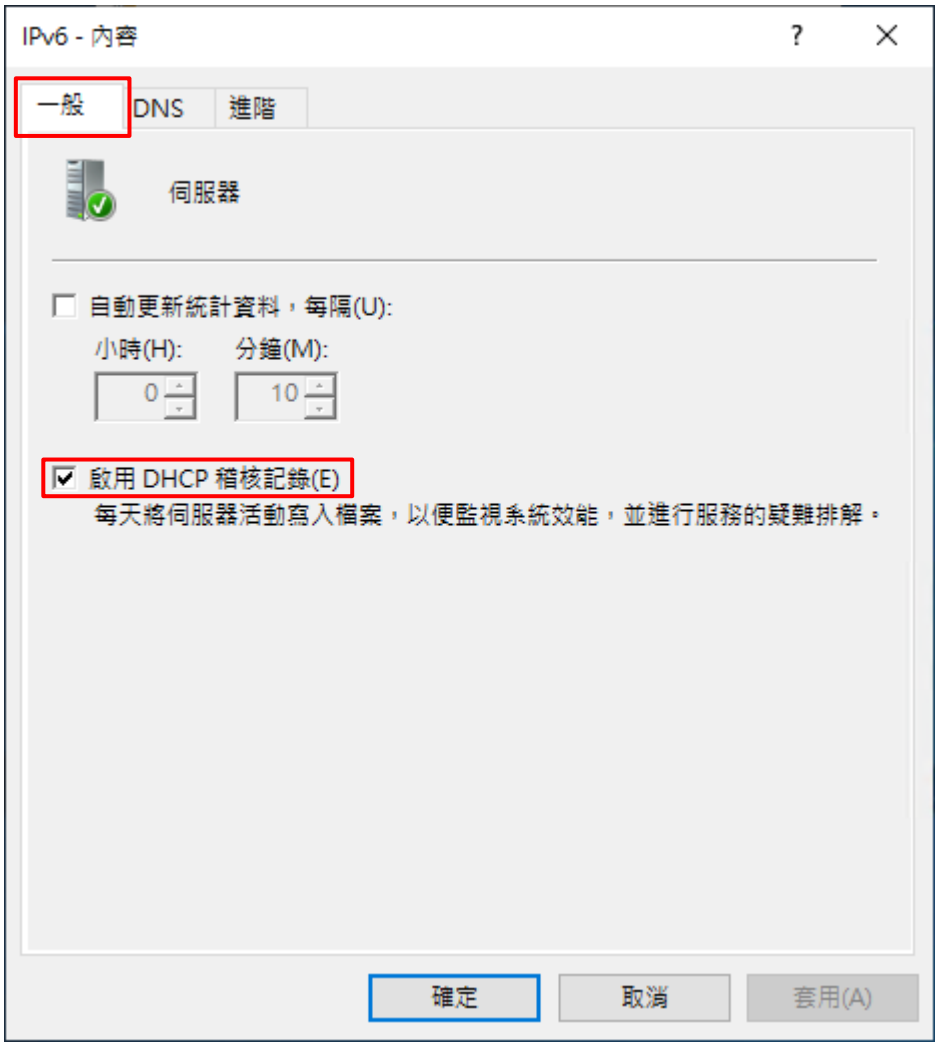
(5) 按 [是] (重啟 DHCP server 服務)

6.2 DHCP IPv6

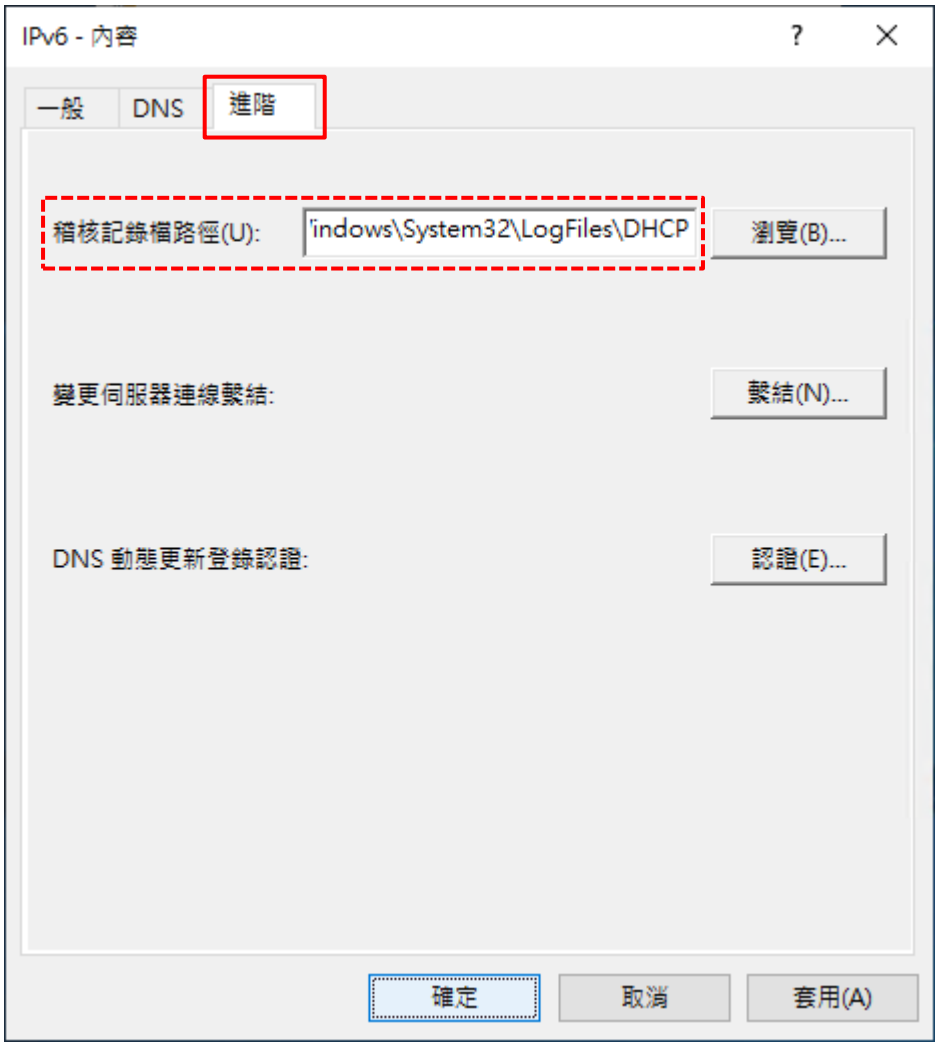
(1) 在 [IPv6] 按滑鼠右鍵 -> 選擇 [內容]



(2) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



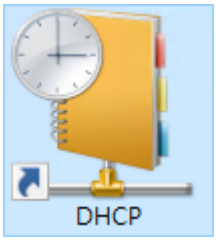
(3) [進階] 頁面 -> 確認稽核記錄檔路徑: [C:\Windows\System32\LogFiles\DHCP]



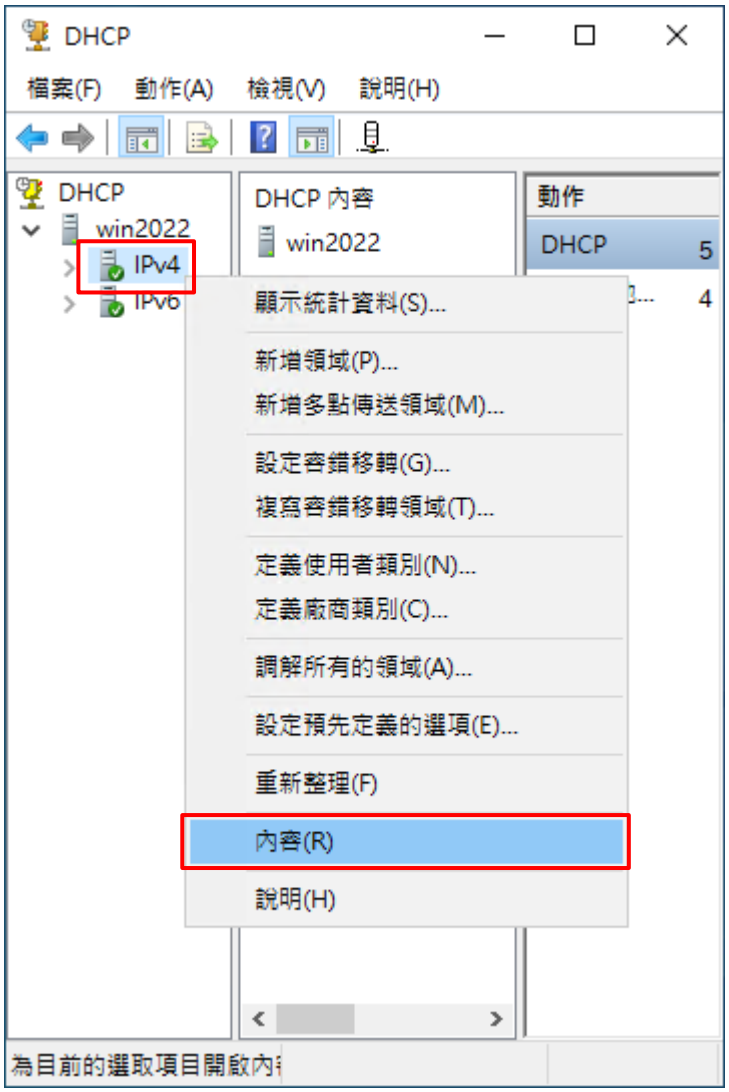
7. Windows 2022

7.1 DHCP IPv4

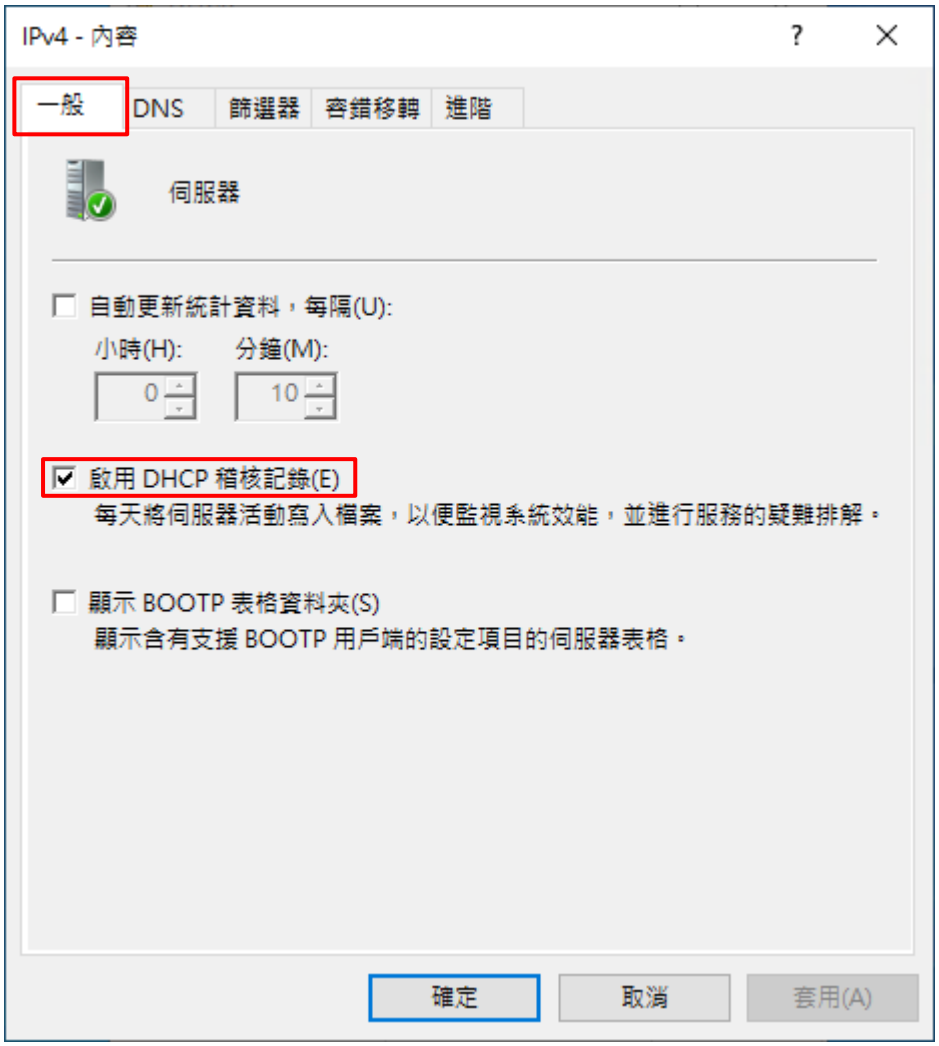
(1) 開啟 [DHCP]



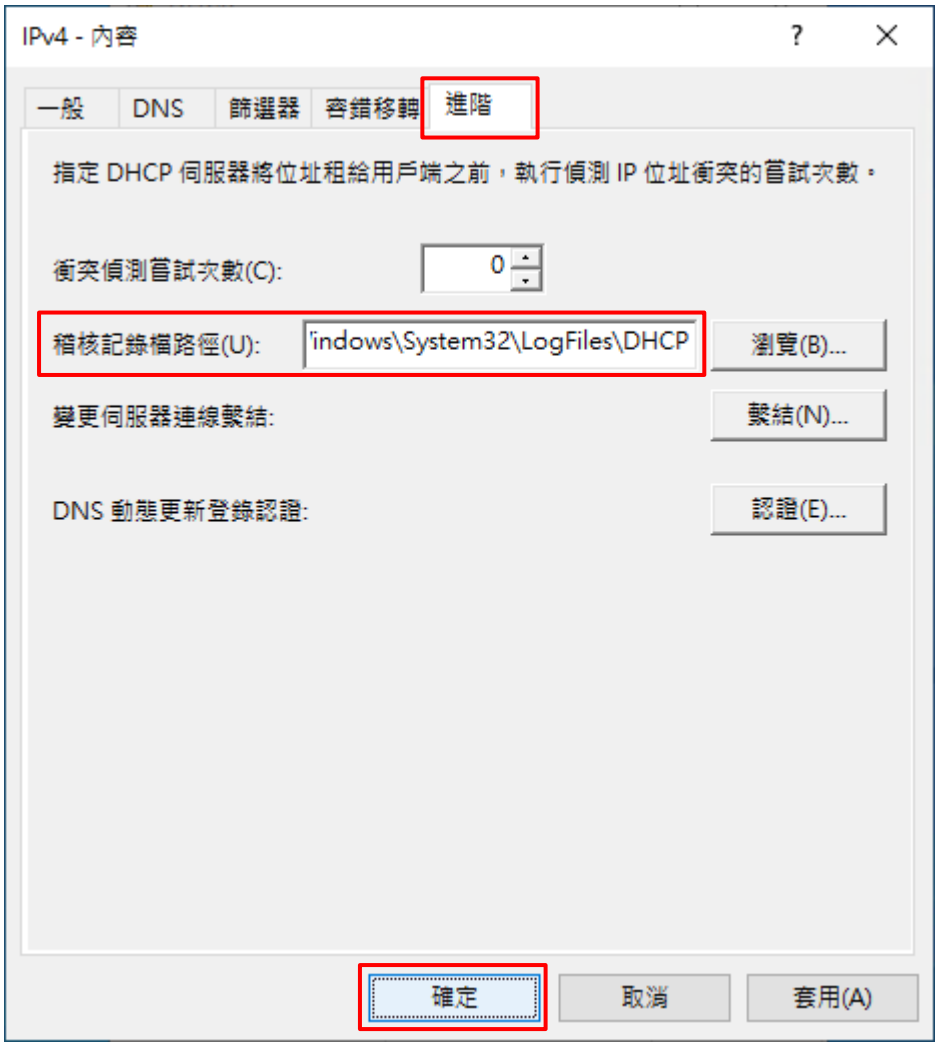
(2) 在 [IPv4] 按滑鼠右鍵 -> 選擇 [內容]



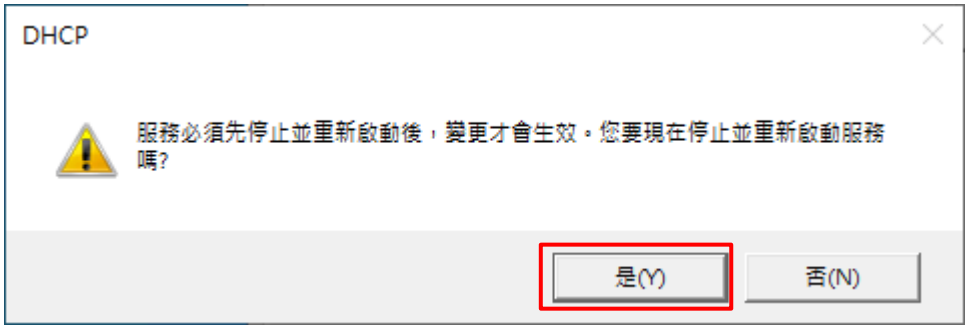
(3) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]



(4) [進階] 頁面 -> 輸入稽核記錄檔路徑: C:\Windows\System32\LogFiles\DHCP -> 按 [確定]

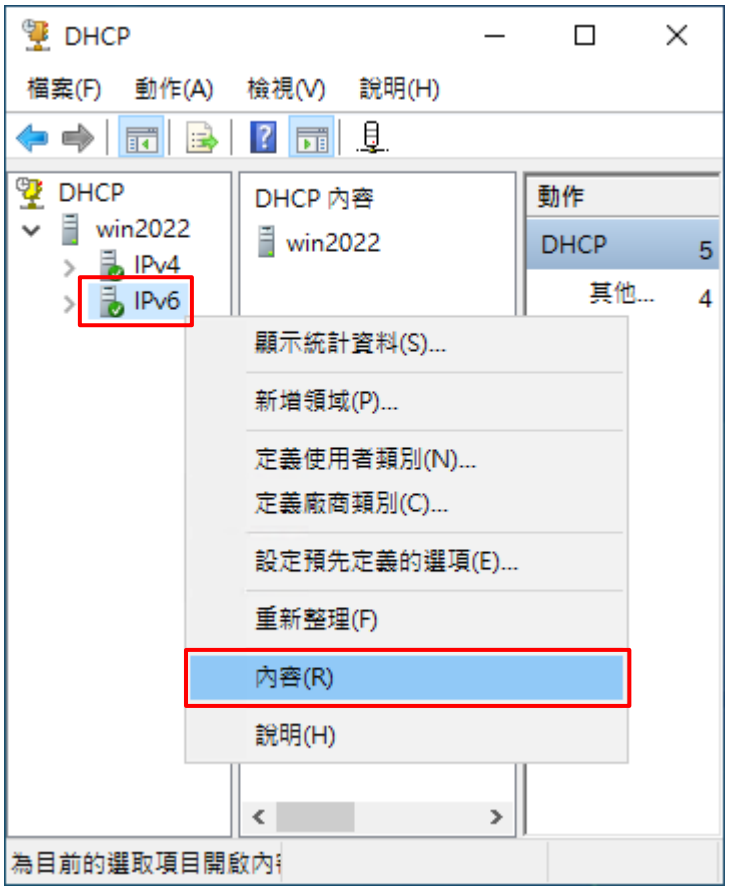


(5) 按 [是] (重啟 DHCP server 服務)

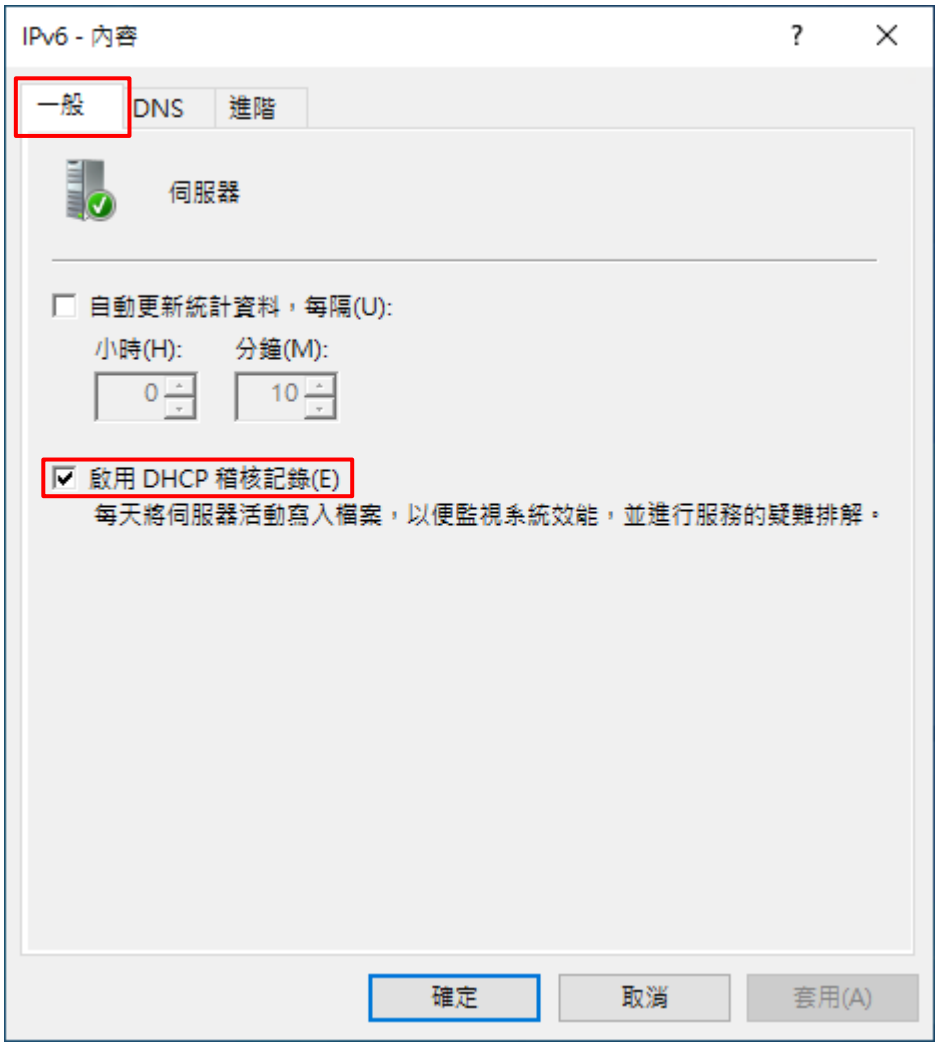


7.2 DHCP IPv6

(1) 在 [IPv6] 按滑鼠右鍵 -> 選擇 [內容]



(2) [一般] 頁面 -> 確認 [啟用 DHCP 稽核記錄]

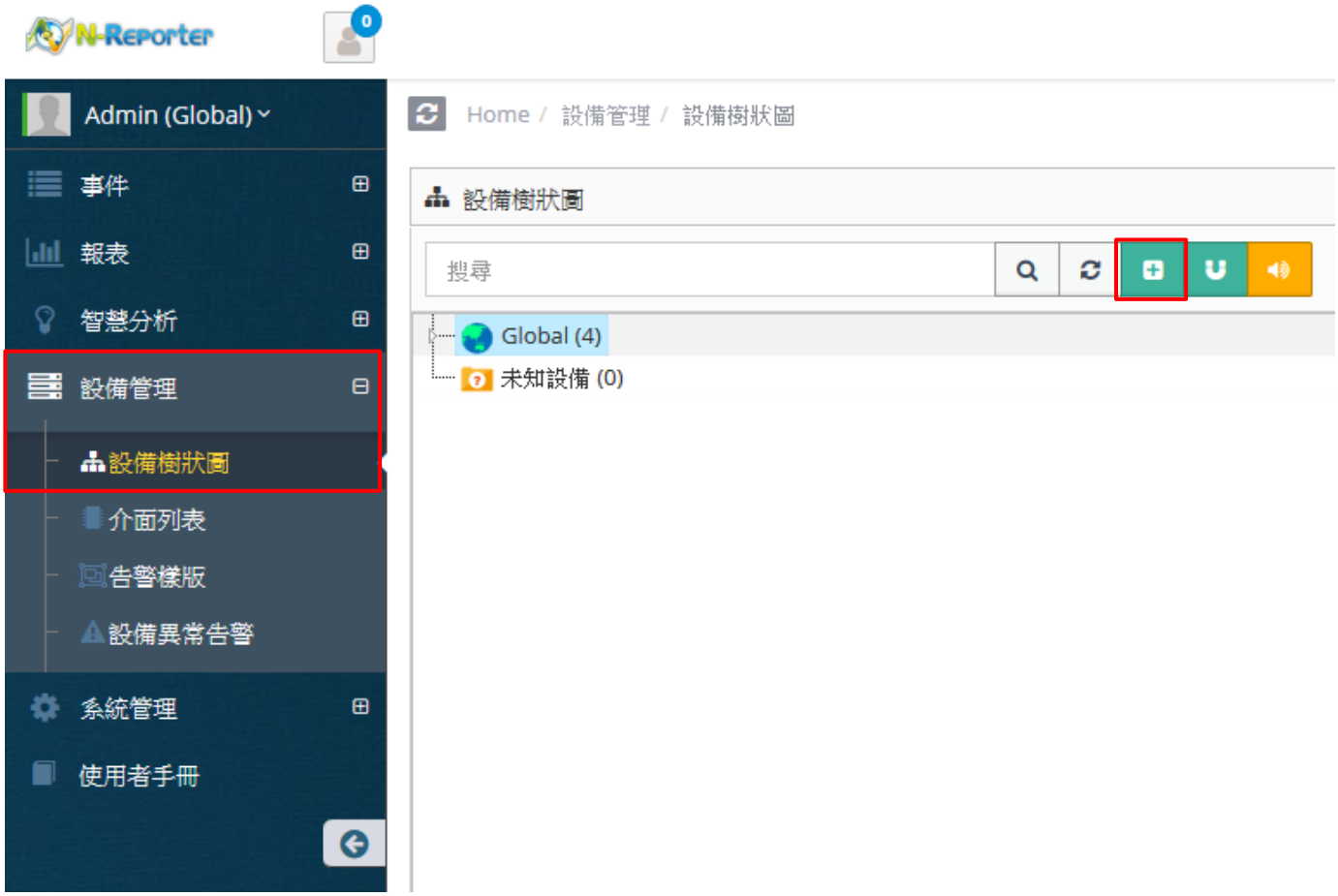


(3) [進階] 頁面 -> 確認稽核記錄檔路徑: [C:\Windows\System32\LogFiles\DHCP]

8. N-Reporter

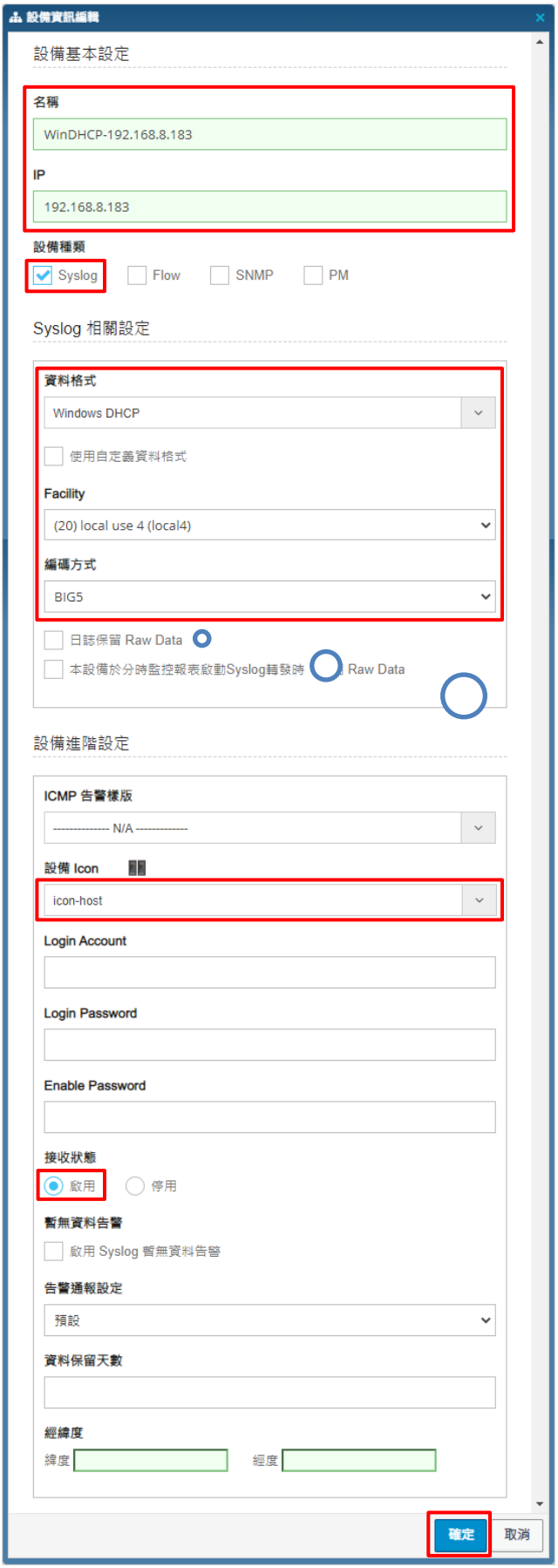
(1) 新增 Windows DHCP 設備

[設備管理] -> [設備樹狀圖] -> 點選 [新增]



(2) 設定 Windows DHCP 記錄的資料格式

輸入名稱和 IP -> 勾選設備種類: [Syslog] -> 選擇資料格式: [Windows DHCP] 和 Facility: [(20) local use 4 (local4)] 和編碼方式: [BIG5] -> 選擇設備 Icon: [icon-host] -> 點選接收狀態: [啟用] -> 按 [確定]



若勾選 [日誌保留 Raw Data]，

[事件查詢] 顯示 Raw Data 資訊

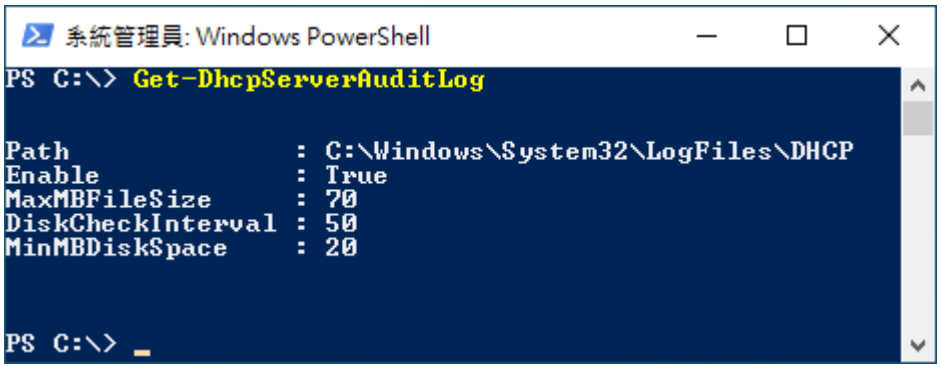
9. 問題排除

9.1 調整 DHCP 記錄檔案大小

(1) 開啟 [Windows PowerShell]

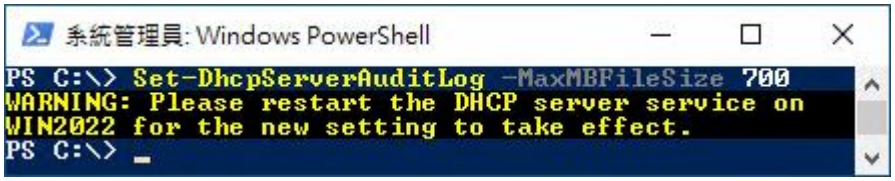
(2) 查看 DHCP Server 稽核 Log 設定

```
PS C:\> Get-DhcpServerAuditLog
```



(3) 設定 DHCP Log 檔案大小

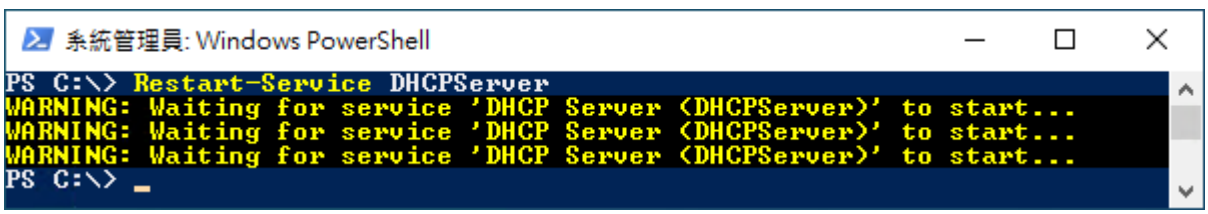
```
PS C:\> Set-DhcpServerAuditLog -MaxMBFileSize 700
```



參數 -MaxMBFileSize 700，700MB 除以 7 天等於單檔最大 100MB

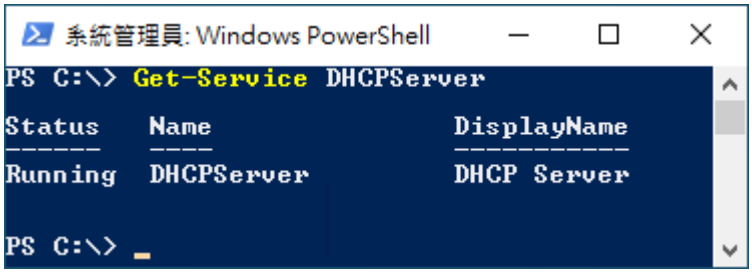
(4) 重啟 DHCP Server 服務

```
PS C:\> Restart-Service DHCPServer
```



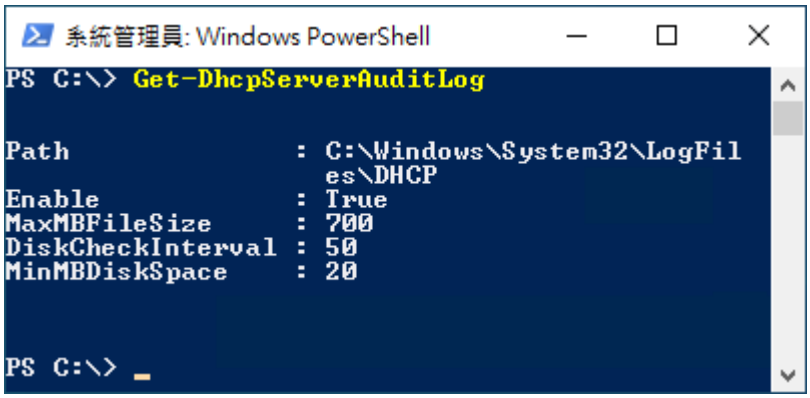
(5) 查看 DHCP Server 服務

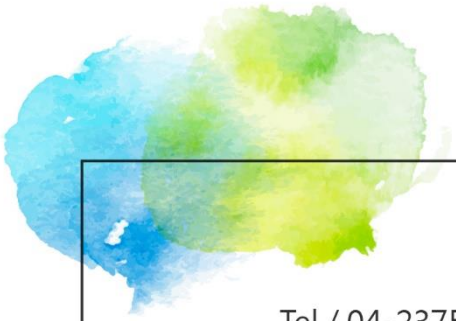
```
PS C:\> Get-Service DHCPServer
```



(6) 查看 DHCP Server 稽核 Log 設定

```
PS C:\> Get-DhcpServerAuditLog
```





Tel / 04-23752865 Fax / 04-23757458
業務詢問 / sales@npartnertech.com
技術詢問 / support@npartnertech.com