Tom Yan 27-09-2025

Proxy，即代理伺服器（Proxy Server），是指位於用戶端與網際網路服務之間的中介，負責轉發用戶的請求，並將伺服器的回應傳回給用戶。 使用代理伺服器可以保護用戶的隱私、增加安全性、管理網路流量，或突破地理限制以存取特定內容。 它如同一個中轉站，使用戶的網路流量透過它進行傳輸，從而隱藏用戶真實的 IP 位址。

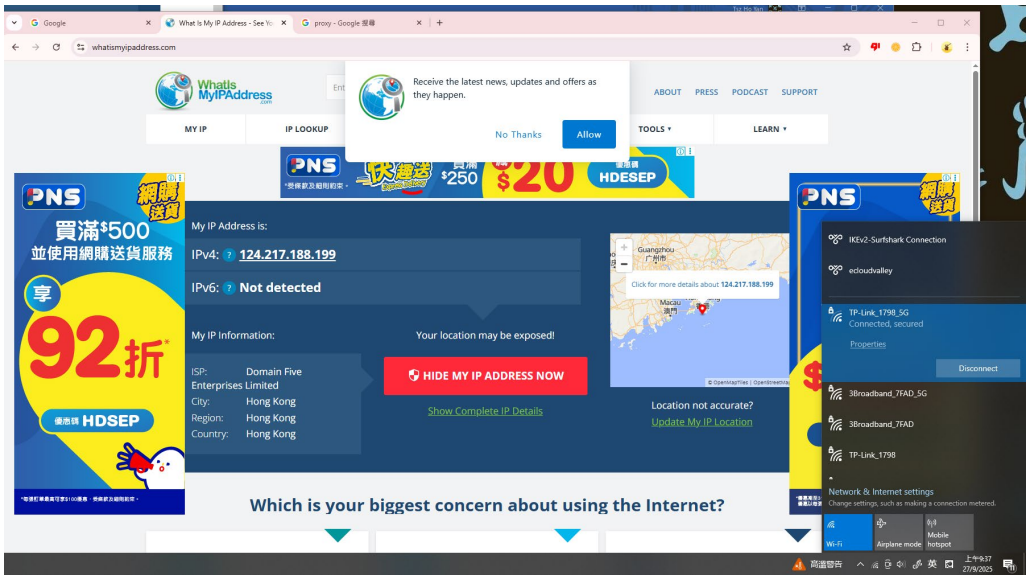
Proxy 的主要用途

- **保護隱私**：

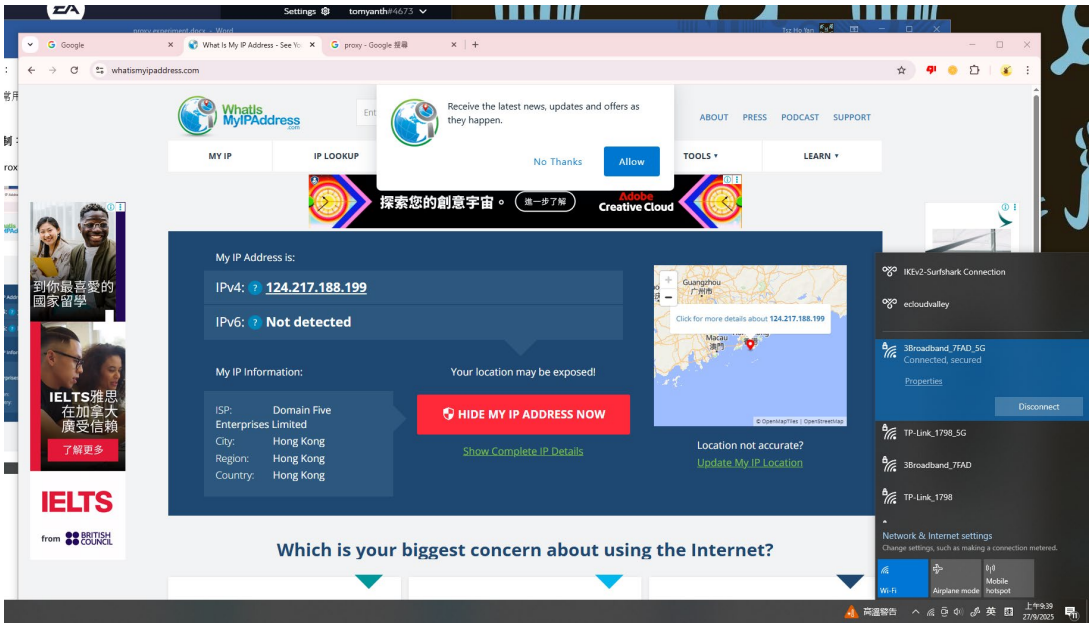
Proxy 可以隱藏用戶真實的 IP 位址，使網站只會記錄 Proxy 伺服器的 IP 位址，從而保護用戶的個人隱私。

其實家居上網已經是一個 proxy 的設計,如圖

連 router

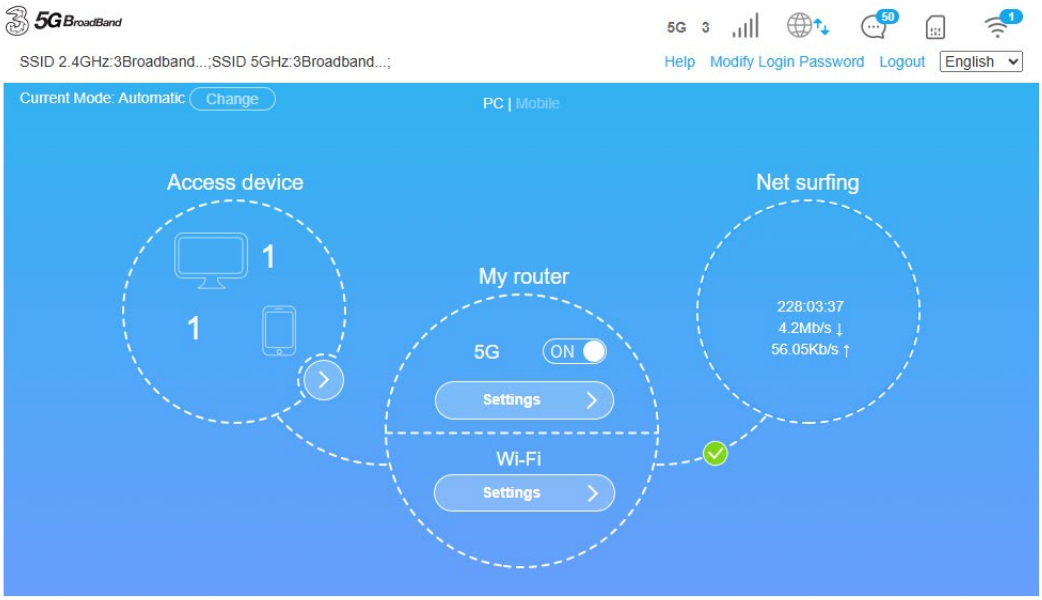


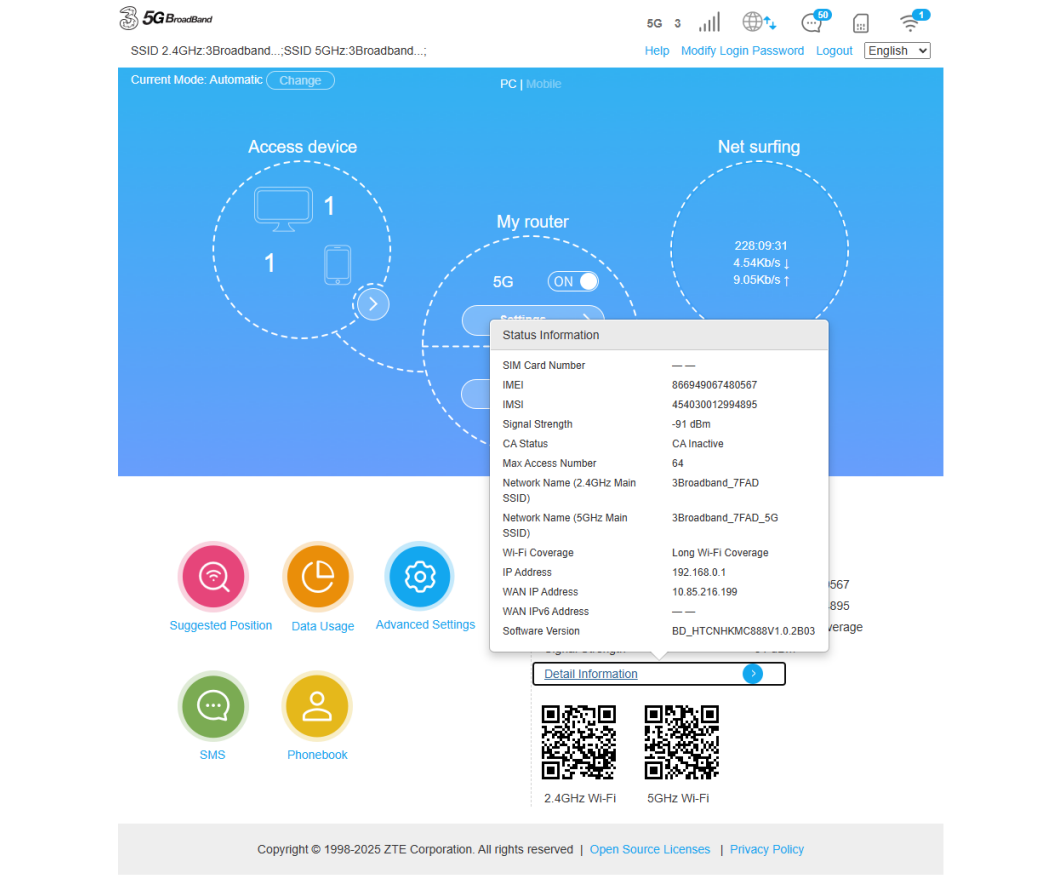
連 modem



顯示 IP 一樣, 所以真實的 ip 其實外網看不到 (masking)

Log in to your modem. As my modem can served as a router as well, so the icon my router is the modem itself





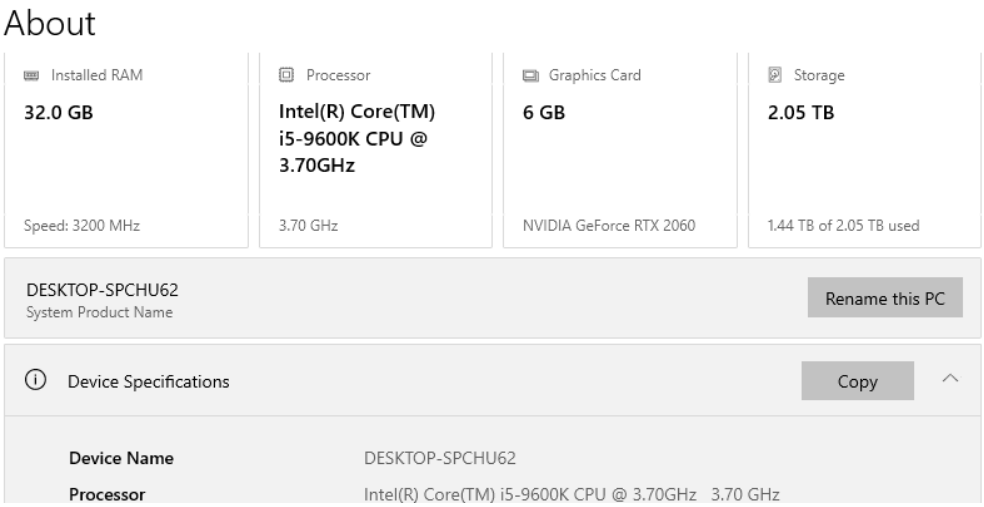
Your WAN (Wide Area Network) IP address, also known as your public IP address, is the unique internet-facing address assigned to your router by your Internet Service Provider (ISP).

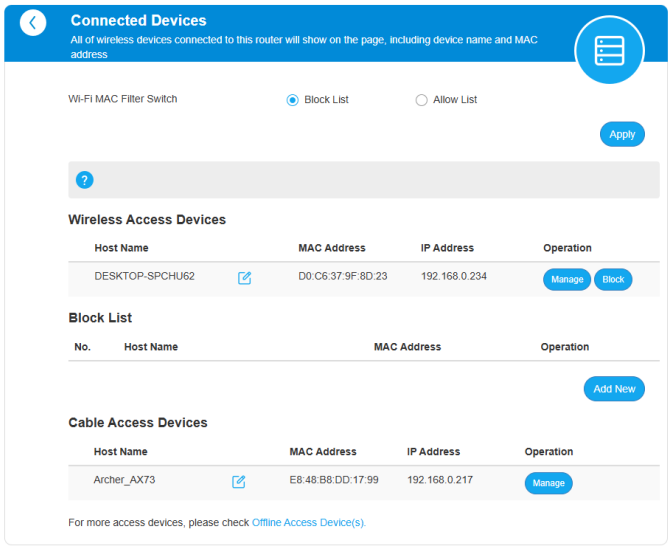
Your router's WAN IP is not the same as your public IP because you are likely behind your Internet Service Provider's (ISP) Network Address Translation (NAT), a system that uses a private IP on your router to represent your device's connection to the internet. This situation, often called Carrier-Grade NAT (CGNAT), is common and can sometimes be resolved by contacting your ISP to request a public IP address.

所以其實你的 modem 不是直接出外網, 而還要經過網絡供應商的 proxy server 才行

Your real IP is here. Archer_AX73 is the my home router. DESTOP-SPCH62 is my PC.

但其實這個 IP 是 private IP, 簡單來說我家的 192.168.0.234 跟你家的不是同一部機器





Usually default SNAT is /24

To change a subnet from /24 to /23, you must update the network device's interface, the router's default gateway, all static IP addresses on end devices, and reconfigure DHCP scopes and DNS accordingly

32-24 = 8 so you theoratically has 2^8 = 256 (private) ip at your disposal. However, some of the ips are reserved for particular purpose such as XXX.XXX.0.1 is usually reserved for the modem itself.