

# Net Walker

# 中文網路教程



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#### 一、Net Walker 登錄

#### (a)下載 Winbox

Net Walker 可通過 Telnet、SSH、Webbox 以及 Winbox 進行設定配置。其中以 Winbox 為使用圖形 管理介面(CUI),使用者較好上手,這裡我們將著重介紹如何使用 Winbox。

開啓 IE > 在網址列輸入「<u>http://www.mikrotik.com/download.html</u>」



#### (b)登錄 Net Walker

Login:輸入帳號 Password:輸入密碼

	Loader v2.2.14		
<u>C</u> onnect To: Login:	<ul><li>輸入 MA</li><li>輸入 帳</li></ul>	C 或 IP 號	Connect
Password:	「 輸入密 Ă	碼	<u>S</u> ave
	Secure Mode	Neep Password Secure Mode	
<u>N</u> ote:	Coad Previous	s bession	<u></u> ools
Address 🔥	User	Note	1

點選 \_\_\_\_ 後,選取顯示的「MAC Address」或「IP Address」,點選 \_\_\_\_\_ 連接進入 Winbox。

📼 WinBox I	Loader v2.2.14				
<u>C</u> onnect To:			Connect		按此找尋「MAC Address」或
<u>L</u> ogin:	MAC Address	IP Address 192 168 88 1	Identity MikroTik	Version 3 20	「IP Address」,即可登入 Winbox。
<u>P</u> assword:	00.10.20.00.11.00	102.100.00.1		0.20	L
<u>N</u> ote:					
Address					

# (C)Winbox 圖形視窗介面

Winbox 視窗介面

	admin@172.16.1.2	54 (MikroTik) - WinBox v3.23 on x86 (x86)
Ю	(24	🗹 Hide Passwords 📕 🛅
	Interfaces	
	Wireless	
	Bridge	
	Mesh	
	PPP	
	IP 🗠	
	IPv6 🗅	
	MPLS	
	VPLS	
	Routing 🗠	
	Ports	
	Queues	
	Drivers	
	System 🗅	
	Files	
	Log	
	SNMP	
	Users	
	Radius	
	Tools D	
	New Terminal	
Ň	Telnet	
nB	Password	
Wi	Certificates	
S	Stores	
0	ISDN Channels	
ute	Make Supout.rif	
Sol	Manual	
-	Exit	

# 命令功能概述

圖示	功能	圖示	功能
+	新增規則		規則註解
-	刪除規則	T	搜索規則條件
*	啓用規則	5	取消操作
×	停用規則	<b>(</b> 4	復原操作

# 二、基本網路設定

#### (a)固定 IP 模式設定

網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」以及「數據機」機器上。

<b>+</b> -		27						Find
	Name	Туре	Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drc
S	ether1	Ethernet	14.0 kb	ps 4.1 kbps	3	5	0	1
	<pre>************************************</pre>	Ethernet	0 Ն	ps Obps	0	0	0	
2	ether3	Ethernet	0 b	ps – 9.8 kbps	0	11	0	1. 3

# 此範例中「ether1」接至「Hub」故名稱定義為「lan」。

General	Ethernet	Status Traffic	01/
	Enterner		UK
	Name:	lan	Cancel
	Туре:	Ethernet	Apply
	MTU:	1500	Disable
MA	Address:	00:0C:42:24:40:00	Comment
	ARP:	enabled	Tomb
1	Master Port:	none	₹ Ioich
Bandwid	th (Rx/Tx):	unlimited 🐺 / ur	limited <b>Ŧ</b>
	Switch:	0	

「ether3」接至「數據機」故名稱定義為「wan」。

	1000 C		
feneral	Ethernet	Status Traffic	OK
	Name:	wan	Cancel
	Туре:	Ethernet	Apply
	MTU:	1500	Disable
MA	IC Address: ARP:	00:0C:42:24:40:02	Commer
1	Master Port:	none	Torch
Bandwid	th (Rx/Tx):	unlimited 🛛 ∓ / unlimi	ited Ŧ
	Switch:	0	

設定 IP 資訊: IP > Addresses

此範例中,區域網路 IP 資訊為「192.168.88.0-192.168.88.255」;廣域網路 IP 資訊為「61.65.72.0-61.65.72.127」。

$\bullet \Box \boxtimes \boxtimes$	- 7		Fit	nd
Address	/ Network	Broadcast	Interface	

		-	
New Address			IP 後面必須加子網路遮罩,以「/24」表示,「/24」
Address: 192.168.88.1/24	OK	-	子網路渡買為「255.255.255.0」。
Network:	Cancel	L	
Broadcast:	Ánniv	- [	無需填寫,系統會依您 IP 設定的子網路遮罩自行
Interface lan			產生 Network 以及 Broadcast。
	Disable	L	
C	Comment	<u> </u>	<sup>、</sup> 塑的你效乱与力娴上。
	Сору	L	<b>进</b> 取您认过止之啊下。
	Remove		
dimbled			
luzzapren.			
Address List			
			Find
Address / Network	Broadcast	I	Interface
☆192.168.88.1/24 192.168.88.0	192.168.88.2	55 la	lan
Addres	s <192.168.88.1	/24>	
åddræse:	192 168 88 1724		
N to 1	192.160.00.1124	1.	
Network:	192.108.88.0	•	Cancel
Broadcast:	192.168.88.255	•	Apply
Interface:	lan	₹	Disable
			Comment
			Comment
			Сору
1 item (1 selected)			Remove

# 設定一組 IP 給 wan 網卡。(61.65.72.1/25)



	Matural	Duradarit		Tutut
Address Address	/ Network	Broadcast	77	Internace
+01.05.72.172 +01.05.72.172	1/24 192.168.88.0	192.168.88	.255	lan
	Addres	s <61.65.72.1,	/25>	
	Address: [	61.65.72.1/25		OK
	Network:	61.65.72.0	•	Cancel
	Broadcast: [	61.65.72.127	•	Apply
	Interface: [	wan	Ŧ	Disable
				Comment
				Сору
				Remove

#### 設定預設閘道:IP > Routes

此範例中,廣域網路預設閘道為「61.65.72.125」。

Route List							x
Routes Rules							
	I				Find	all	Ŧ
Destination /	Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. Source	-
DAC 61.65.72.0/25			wan	0		61.65.72.1	
DAC 192.168.88.0/24			lan	0	l]	192.168.88.1	
2 items							

Route List					23
Routes Rules					
+ - / 8 6 7				Find	all Ŧ
Destination / Gateway	Gateway I	. Interface	Distance	Routing Mark	Pref. Source 💌
DAC 192.168.88.0/24		lan		0	192.168.88.1
					1
New Route				<b>**</b>	
General Attributes	3			OK	
Destination:	0.0.0.0/0			Cancel	
Gateway:	61.65.72.125		\$	Apply	
Gateway Interface:			\$	Disable	
Interface:				Comment	
Check Gateway:			•	Сору	
2 items Type:	unicast		₹	Remove	
Distance:					8
Scope:	30				
Target Scope:	10				
Routing Mark:			•		
Pref. Source:			<b>•</b>		
disabled			active		

# Ping 測試工具: Tools > Ping

測試線路是否正常?以中華電信 DNS 的 IP (168.95.1.1) 為測試點。Time 出現回應值即線路正常。

P In	ing To: terface:	168.95.1.1 any				₹	Stop	
Packat	Count	🗌 ARP Ping				1	New Windo	w
T ac Ker	imeout:	1000				ms		
#	Hos	t	Time	Reply Size	TTL	Status		1,
0	168	.95.1.1	11ms	50	244			1
1	168	.95.1.1	11ms	50	244			T
2	168	.95.1.1	10ms	50	244			
3	168	.95.1.1	12ms	50	244			
4	168	.95.1.1	11ms	50	244			
5	168	.95.1.1	10ms	50	244			
6	168	.95.1.1	11ms	50	244			

# 共享上網 NAT 設定: IP > Firewall > NAT

the second secon		Mangle	Ser	vice Ports	Connections	Address Lis	ts Layer71	Protocols			
	Ø 83	2	7	😂 Re	set Counters	oo Reset A	ll Counters	Fi	nd	dl 🛛	1
¥	Action	Chain		Sm Addr	ness Det Adda	ness Proto	Src Port	Dst Port	In Inte	Out	In

將內部虛擬 IP 經由 NAT 轉換,使內部網路可共享上網。

🔝 New NAT Rule			<b></b>	
General Advanced Extra Acti	on Statistics		OK	
Chain: srenat		Ŧ	Cancel	
Src. Address: 🗌 192.168.88	.0/24	A	Apply	輸入內部網路 IP 區段。
Dst. Address:		•	Disable	
Protocol:		▼	Comment	
Src. Port:			Сору	
Dst. Port:		<b>v</b>	Remove	
Any. Port:		•	Reset Counters	
In. Interface:		▼	Reset All Counters	
Out. Interface:		▼		
Packet Mark:				
Connection Mark:				
Routing Mark:		▼		
Connection Type:		▼		

New NAT Rule	<b>.</b>	
General Advanced Extra Action Statistics	ОК	自動分配 IP 位址取代 IP
Action: masquerade	Cancel	的來源位址。
	Apply	
	Disable	
	Comment	
	Сору	
	Remove	
	Reset Counters	
	Reset All Counters	

ternet Protocol Version 4 (TC 一般 如果您的網路支援這項功能, 則,您必須詢問網路系統管理	P/IPv4) 內容	
<ul> <li>         自動取得 IP 位址(O)         <ul> <li>             使用下列的 IP 位址(S):             IP 位址(I):             子網路遮罩(U):             預設開道(D):         </li> </ul> </li> </ul>	192.168.88.220 255.255.255.0 192.168.88.1	PC 網卡 IP 設定: IP 位址: 192.168.88.220/24 預設閘道:192.168.88.1(設定在 lan 網卡的 IP)
<ul> <li>自動取得 DNS 伺服器位均</li> <li>使用下列的 DNS 伺服器( )</li> <li>(債用 DNS 伺服器(P):</li> <li>其他 DNS 伺服器(A):</li> </ul>	止(B) 之址(E): 168.95.1.1 ...	

測試 PC 線路是否正常?

利用命令提示字元, 輸入「ping 168.95.1.1」 測試線路是否正常。(時間有回應時間數值即線路正常)



# (b)Cable 浮動 IP 模式設定

#### 網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」以及「數據機」機器上。

Inte	rface Ethernet	EoIP Tunnel IP Tun	nel VLAN VRRP	Bonding			[]	Find
_	Name	/ Type	Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drc •
R	ether1	Ethernet	14.0 kbps	4.1 kbps	3	5	0	
	ether2	Ethernet	O bps	O bps	0	0	0	1
R	ether3	Ethernet	O bps	9.8 kbps	0	11	0	

# 此範例中「ether1」接至「Hub」故名稱定義為「lan」。

	Name:						OK
Туре:		lan					Cancel
	Туре:	Etherne	et				Apply
	MTU:	1500					Disable
MA	C Address:	00:0C:	42:24:4	40:00			Disable
	ARP:	enabled	1			Ŧ	Comment
M	faster Port:	none				Ŧ	Torch
Bandwidt	h (Rx/Tx):	unlimit	ied	Ŧ	unlimited	Ŧ	
	Switch:	0					

General	Ethernet	Status Traffic	OF
	N		
	IN BUILE.	wan	Cancel
	Туре:	Ethernet	Apply
	MTU:	1500	Dimble
MA	IC Address:	00:0C:42:24:40:02	Disable
	ARP:	enabled	Te Comment
1	Master Port:	none	Torch
Bandwid	.th (Rx/Tx):	unlimited 🛛 🐺 / unlimited	Ŧ
	Switch:	0	

「ether3」接至「數據機」故名稱定義為「wan」。

#### 設定 IP 資訊: IP > Addresses

此範例中,區域網路 IP 資訊為「192.168.88.0-192.168.88.255」;廣域網路 IP 使用自動取得浮動 IP。

Address List			
			Find
Address	/ Network	Broadcast	Interface
10000000.55		000000000000	

設定一組 IP 給 lan 網卡。(192.168.88.1/24)

🗈 New Address 🛛 💌	IP 後面必須加子網路遮置,以「/24」表示,「/24」
Address: 192.168.88.1/24 OK	子網路遮罩為「255.255.255.0」。
Network: Cancel	
Broadcast: Apply	無需填寫,系統會依您 IP 設定的子網路遮罩自行
Interface: lan Disable	產生 Network 以及 Broadcast。
Comment	
Сору	選取您欲設定之網卡。
Remove	
disabled	
-	
II Address List	
+ * * 🗂 🍸	Find
Address / Network Broadc	cast Interface 👻
Address <192.168	8.88.1/24>
Address: 192.168.88.	1/24 OK
Network: 192.168.88.	.0 Cancel
Broadcast: 192.168.88.	.255 Apply
Interface: lan	Disable
	Comment
	Сору
1 ibus (1 celected)	Remove
disabled	

設定一組 IP 給 wan 網卡。(自動取得浮動 IP) 自動取得浮動 IP: IP > DHCP Client





#### Ping 測試工具: Tools > Ping

測試線路是否正常?以中華電信 DNS 的 IP (168.95.1.1) 為測試點。Time 出現回應值即線路正常。

🔜 Pin	g							×
Genera	d Adv	anced					Ping	
Р	ing To:	168.95.1.1					Stop	
In	terface:	any				Ŧ	Close	
Packet Ti	Count: imeout:	ARP Ping 1000				] 🕶	New Windo	W
#	Ho	st	Time	Reply Size	TTL	Status		
0	168	8.95.1.1	11ms	50	244			
1	168	8.95.1.1	11ms	50	244			
2	168	8.95.1.1	10ms	50	244			
3	168	8.95.1.1	12ms	50	244			
4	168	3.95.1.1	11ms	50	244			
5	168	3.95.1.1	10ms	50	244			
6	168	3.95.1.1	11ms	50	244			

共享上網 NAT 設定: IP > Firewall > NAT

		Mangle	Servic	e Ports C	onnections	Address Li	sts Layer71	Protocols		
	~ *		7	≋ Reset	Counters	oo Reset A	Il Counters	Find	d all	
A	Action	Chain	S	m Address	Det Add	ress Proto	Sm Port	Dst. Port	In. Inte	Out. In

將內部虛擬 IP 經由 NAT 轉換,使內部網路可共享上網。

MAANTER EVIIG VEROIL SIGUSTICS		OK	
Chain: srcnat	<b>.</b>	Cancel	
Src. Address: 🔲 192.168.88.0/24		Apply	輸入內部網路 IP 區段 。
Dst. Address:	<b>-</b>	Disable	
Protocol:		Comment	
Src. Port:		Сору	
Dst. Port.	•	Remove	
Any. Port:		Reset Counters	
In. Interface:	<b>`</b>	Reset All Counters	
Out. Interface:	<b>-</b>		
Packet Mark:	•		
onnection Mark:	<b>•</b>		
Routing Mark:	<b>~</b>		
onnection Type:			
New NAT Rule			
New NAT Rule eneral Advanced Extra Action Statistics		OK	
New NAT Rule eneral Advanced Extra Action Statistics Action <u>masquerade</u>		OK Cancel	自動分配 IP 位址取代
New NAT Rule eneral Advanced Extra Action Statistics Action masquerade		OK Cancel Apply	自動分配 <b>IP</b> 位址取存 的來源位址 。
New NAT Rule meral Advanced Extra Action Statistics Action masquerade		OK Cancel Apply Disable	自動分配 <b>IP</b> 位址取作 的來源位址 。
New NAT Rule eneral Advanced Extra Action Statistics Action <u>masquerade</u>		OK OK Apply Disable Comment	自動分配 <b>IP</b> 位址取作 的來源位址 。
New NAT Rule eneral Advanced Extra Action Statistics Action <u>masquerade</u>	¥	OK OK Cancel Apply Disable Comment Copy	自動分配 IP 位址取作 的來源位址 。
New NAT Rule eneral Advanced Extra Action Statistics Action macquerade		OK OK Cancel Apply Disable Comment Copy Remove	自動分配 <b>IP</b> 位址取作 的來源位址 。
New NAT Rule eneral Advanced Extra Action Statistics Action masquerade	Ŧ	OK OK Cancel Apply Disable Comment Copy Remove Reset Counters	自動分配 <b>IP</b> 位址取作 的來源位址 。

rmet Protocol Version 4 (TC 般 如果您的網路支援這項功能, 則,您必須詢問網路系統管理	P/IPv4) 內容 ?	
<ul> <li>○ 自動取得 IP 位址(O)</li> <li>● 使用下列的 IP 位址(S):</li> <li>IP 位址(I):</li> <li>子網路遮罩(U):</li> <li>預設開道(D):</li> </ul>	192 . 168 . 88 . 220 255 . 255 . 255 . 0 192 . 168 . 88 . 1	PC 網卡 IP 設定: IP 位址: 192.168.88.220/24 預設閘道: 192.168.88.1(設定在 lan 網卡的 IP)
<ul> <li>自動取得 DNS 伺服器位式</li> <li>使用下列的 DNS 伺服器( 慣用 DNS 伺服器(P):</li> <li>其他 DNS 伺服器(A):</li> </ul>	止(B) 立址(E): 168.95.1.1 ...	
	進階(∀) 確定 取消	

測試PC線路是否正常?

利用命令提示字元,輸入「ping 168.95.1.1」測試線路是否正常。(時間有回應時間數值即線路正常)



# (c)PPPoE 撥接模式設定

#### 網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」以及「數據機」機器上。

Inte	face Ethernet	EoIP Tunnel IP Tun	nel VLAN VRRP	Bonding			1	Find
1	Name		Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drc 🔻
R	ether1	Ethernet	14.0 kbps	4.1 kbps	3	5	0	(
	ether2	Ethernet	O bps	O bps	0	0	0	
R	ether3	Ethernet	O bps	9.8 kbps	0	11	0	

# 此範例中「ether1」接至「Hub」故名稱定義為「lan」。

General	Ethernet	Status	Traffic				OK
	Name:	lan					Cancel
	Туре:	Ethern	net				Apply
	MTU:	1500					Distle
MA	C Address:	00:0C	:42:24:4	00:00			Disable
	ARP:	enable	:d			₹	Comment
]	Master Port:	none				Ŧ	Torch
Bandwid	th (Rx/Tx):	unlim	ited	Ŧ	unlimited	Ŧ	
	Switch:	0					

General	Ethernet	Status Trai	ffic		OK
	Name:	wan			Cancel
	Туре:	Ethernet			Apply
	MTU:	1500			Diall
MA	AC Address:	00:0C:42:2	4:40:02		Disable
	ARP:	enabled		Ŧ	Comment
1	Master Port:	none		Ŧ	Torch
Bandwid	th (Rx/Tx):	unlimited	∓ / unlimited	Ŧ	
	Switch:	0			
			olivie	link	ŀ
	n	mmg	slave	link o	k

「ether3」接至「數據機」故名稱定義為「wan」。

Interface L	.ist			ett di	0.			X	1
Interface Eth	ernet EoIP Tunnel IP	Tunnel VL.	AN VRRP	Bonding					
<b>+</b> - <	/ 🛛 🖪 🍸						[	Find	
EOIP Tu	innel		Tx	Rx	Tx Pac	Rx Pac	Tx Drops	s Rx Drc 🔻	
IP Tunn	el		0 bps 10.8 kbps	0 bps 3 fi khns	2	0	( 		
VLAN			0 bps	0 bps	Ō	Ō	) C	Ď Ő	
VRRP									
Bondin	g								
Bridge									
Mesh									
Virtual	Ethernet								
6to4									
PPP Ser	ver								
PPP Clie	ent								
PPTP Se	erver							•	
PPTP C	lient								
L2TP Se	erver								
L2TP C	ient								
OVPN S	Server								
OVPN	Client								
PPPoE	Server								
PPPoE	Client								
Virtual/	AP								
WDS									
🔝 New Inte	erface				X				
General Dia	d Out Status Traffic	:			) K				
Name:	pppoe-outl			Ca	ncel	- 1	名稱可自	目行定義。	
Туре:	PPPoE Client				oply				
Max MTU:	1480				11-2	_ 4	<b>平</b> ⁄何修3/	ケ、剄=辺/詰	<b>沙澤</b> 町司。
Max MRU:	1480				sable	#	照須修り	义 、 ぶくかい   巨	。「山村可」。
MRRU:				Con	nment				
				C	ору				
Interfaces:	wan		Ŧ	Ke	move	j,	選取您欲	次設定之網	卡。
					orch				
				Sc	an				
disabled	running	slave		Status:					

General Dial Out	Status Traffic		OK					
Service:		•	Cancel	1				
AC Name:		▼	Apply	]				
User: test1234	@hinet.net		Disable		輸入 ISP 酉	记發的帳號	虎及密碼。	o
Password: ******	**		Comment					
Profile: default		₹	Сору	j				
🗌 Dial	On Demand		Remove		白毛拉白	응다 북동 교 한 극 소그 미		
✓ Add	Default Route		Torch		日動和增調	別思思認め	合田。	44 D.M.G
l [Use ]	Peer DNS		Scan	iL	使用路田裙	語默認 Dr	NS 給 ppp	⊮J DNS ∘
- Allow	1022 - 22							
✓ pap	🔽 chap							
🖌 mschap1	🖌 mschap2							
disabled	mning slave	Status	0.	-				
The second			5 C					
Interface List								1
Interface List	FolP Tunnel IP Tunn	el VI.AN VPPP	Bonding				<b>×</b>	
Interface List Interface Ethemet	EoIP Tunnel IP Tunn	el VLAN VRRP	Bonding			F	ind	
Interface List Interface Ethernet	EoIP Tunnel IP Tunn	el VLAN VRRP	Bonding	Tx Pac	. Rx Pac	F Tx Drops	ind Rx Drd V	
Interface List Interface Ethemet	EoIP Tunnel IP Tunn Type Ethernet	el VLAN VRRP Tx O bps	Bonding Rx 0 bps	Tx Pac	. Rx Pac 0 0	F Tx Drops 1 0	ind Rx Drd ▼ 0	
Interface List Interface Ethemet Interface Rether Name Alpha Same Alpha Sama Alpha Same Alpha Sama Alpha Same Alpha Sama Alpha Sa	EoIP Tunnel IP Tunn Type Ethernet Ethernet	el VLAN VRRP Tx 16.6 kbps	Bonding Rx 0 bps 4.1 kbps	Tx Pac	. Rx Pac 0 0 3 5	F Tx Drops 1 0 0	ind Rx Drd ▼ 0 0	
Interface List Interface Ethernet Interface Remet Name (>>ether2 R (>>lan R (>>pppoe-out1 R (>>wan	EoIP Tunnel IP Tunn Type Ethernet Ethernet PPPoE Client Ethernet	el VLAN VRRP Tx 0 bps 16.6 kbps 317 bps 523 bps	Bonding Rx 0 bps 4.1 kbps 380 bps 586 bps	Tx Pac	. Rx Pac 0 0 3 5 1 1 1 1	Tx Drops 1 0 0 2 0	ind Rx Drd ▼ 0 0 0 0 0	
Interface List Interface Ethemet Interface Ethemet Interface Ethemet Interface Ethemet Interface List Interface List Interface List Interface List Interface List Interface Ethemet Interface Ethemet Interface Ethemet Interface Ethemet Interface Interface List Interface Ethemet Interface Ethemet Interface Interface I	EoIP Tunnel IP Tunn Type Ethernet Ethernet PPPoE Client Ethernet	el VLAN VRRP Tx 0 bps 16.6 kbps 317 bps 523 bps ut1 前面出現「R	Bonding Rx 0 bps 4.1 kbps 380 bps 586 bps	Tx Pac 功。	. Rx Pac 0 0 3 5 1 1 1 1	F Tx Drops 1 0 0 2 0	ind Rx Drd ▼ 0 0 0	
Interface List Interface Ethemet  Name  () Name () Na	EoIP Tunnel IP Tunn Type Ethemet Ethemet PPPoE Client Ethemet Pppoe-o	el VLAN VRRP Tx 0 bps 16.6 kbps 317 bps 523 bps tut1 前面出現「R	Bonding Rx 0 bps 4.1 kbps 380 bps 586 bps	Tx Pac 功。	. Rx Pac 0 0 3 5 1 1 1 1	F Tx Drops 1 0 0 2 0	ind Rx Drd ▼ 0 0 0 0	

設定 IP 資訊:IP > Addresses

此範例中,區域網路 IP 資訊為「192.168.88.0-192.168.88.255」;廣域網路 IP 使用 PPPoE 撥號。

Address List			
			Find
Address	/ Network	Broadcast	Interface
1			

# 



Address /	Network	Broadcast	Interface
<b>令192.168.88.1/24</b>	192.168.88.0	192.168.88.255	lan
	Address	<192.168.88.1/2	4> 🗾
	Address: 1	92.168.88.1/24	ОК
	Network: 1	92.168.88.0	Cancel
	Broadcast: 1	92.168.88.255	Apply
	Interface: 1	m 🗍	Disable
			Comment
			Сору
	-		Remove

設定一組 IP 給 wan 網卡。(PPPoE 撥號)

Address List				
+ - < × 🗂 🍸		Find		
Address / Network	Broadcast Interf	ace 🚽		
D 守125.230.19.24 122.127.128.2 今192.168.88.1/24 192.168.88.0	54 pppoe 192168.88.255 lan	e-outl	PPPoE 撥號取得	動態 IP。(D 代表動態)
2 items (1 selected)				
Route List			8	
Routes Rules				
+ - < = 7		Fit	nd all ∓	
Destination / Gateway	Gateway I Interface	Distance Routing M	Mark Pref. Sourc 🕶	
DAS 0.0.000 122.127.128.254 DAC 122.127.128.2	pppoe-outl pppoe-outl	0	125.230.19.24	目動設定預設閘道。
DAC 192.168.88.0/24	lan	0	192.168.88.1	
▲ Address List ▲ □ ② ② ③ ▲ Address ▲ № □ ⊕ 125.230.19.24 1 ⊕ 192.168.88.1/24 1 PPPoE 撥號取得的「	<b>V</b> <u>letwork</u> 22.127.128.254 92.168.88.0 192.168.88 Network-IP」即是 PPPoI	Find Interface pppoe-out1 255 lan E 的預設開道 IP。		

Ping 測試工具: Tools > Ping

測試線路是否正常?以中華電信 DNS 的 IP (168.95.1.1) 爲測試點。Time 出現回應值即線路正常。

Jeneral A	lva	nced						Ping	
Ping T	o:	168.95.1.1						Stop	
Interfac	e:	any				_	Ŧ	Close	
		ARP Pir	ng					C1036	
acket Cour	t I						1.	New Wind	ow
								-	
Timeou	ut:	1000					ms		
¥ H	lost			Time	Reply Size	TTL	Status	\$	-
0 1	68.	95.1.1		14ms	50	249			
1 1	68.	95.1.1		14ms	50	249			
2 1	68.	95.1.1		14ms	50	249			
3 1	68.	95.1.1		13ms	50	249			
4 1	68.	95.1.1		13ms	50	249			
5 1	68.	95.1.1		14ms	50	249			
6 1	68.	95.1.1		14ms	50	249			
7 1	68.	95.1.1		14ms	50	249			
8 1	68.	95.1.1		14ms	50	249			
9 1	68.	95.1.1		14ms	50	249			
0 1	68.	95.1.1		14ms	50	249			
0 1	68.	95.1.1		14ms	50	249			
of 11 pack	tets	received	0% pa	ket loss	Min: 13ms	Avg	: 13ms	Max: 14m	ns -
						- 111 - 25		- 175	
· 上 総	N.	AT 設定	: IP >	• Firewall >	> NAT				
. The second H									
Eirewall		0 T 3	e Servio	e Ports Conne	ections Addre:	ss Lists	Layer	7 Protocols	
Eirewall Filter Rules	N.	an Mang							
Firewall	N.	Mangi		· Dunk Com					d

將內部虛擬 IP 經由 NAT 轉換,使內部網路可共享上網。

X

Ŧ

New NAT Rule			×	
feneral Advanced	Extra Action Statistics		OK	
Chain: 🔤	rcnat		Cancel	
Src. Address:	192.168.88.0/24	<b>*</b>	Apply	輸入內部網路 IP 區段
Dst. Address:			Disable	
Protocol:			Comment	
Src. Port: [			Сору	
Dst. Port:		*	Remove	
Any, Port: [		•	Reset Counters	
In. Interface: [		▼	Reset All Counters	
Out. Interface:				
Packet Mark:		<b>•</b>		
Connection Mark:		•		
Routing Mark:				
Connection Type:		•		
New NAT Rule         General Advanced Extra Action Statistics       OK         Chain: we mat       Cancel         Sc. Address:       192168 89 0/24         Dt Address:       Disable         Protocol       Comment         Sc. Fort       Copy         Dt Address:       Comment         Sc. Fort       Copy         Dt Address:       Comment         Conscience       Copy         Rest Counters       Reset All Counters         Packet Mark:       Connection Mark:         Connection Mark:       Connection Mark:         Routing Mark:       Connection Mark:         Routing Mark:       Cancet         New NAT Rule       Cancet         General Advanced Extra Action Statistics       OK         Action:       Interface:         Disable       Comment         Copy       Rest All Counters         New NAT Rule       Extra Action Statistics         General Advanced Extra Action Statistics       OK         Action:       Interface:         Connection Type:       Disable         Connection Que addition:       Statistics         Action:       Interface:         Connection:       C				
New NAT Rule         General Advanced Extra Action Staintics       OK         Chain: scenat       OK         Ste. Addres:       192168.88.024         Probocol:       Omment         Ste. Fort       Comment         Ste. Fort       Copy         Dat Advanced Extra Action Staintics       OK         Out Interface:       OK         Reset Mark:       Connection Type:         Interface:       OK         Remove       Apply         Action Staintics       OK         Action Staintics       OK         Action Staintics       OK         Action Staintics       OK         Disable       Comment         Connection Type:       OK         Action Staintics       OK         Action Staintics       OK         Action Staintics       OK         Action Staintics       OK         Oppy       Reset Counters         Peaket Mark:       Connent         Connection Type:       Disable         Comment       Copy         Bisble       Comment         Copy       Reset Counters         Peaket All Counters       Peak All Counters         <				
	Extra Action Statistics	10	OK	
Action: mass	Extra Action Statistics verade	<b>∓</b>	OK Cancel	· 自動分配 IP 位址取代 Ⅱ
Action: mass	Extra Action Statistics werade	Ŧ	OK Cancel Apply	· 自動分配 IP 位址取代 Ⅱ 的來源位址 。
Action: mass	Extra Action Statistics verade	Ŧ	OK Cancel Apply Disable	自動分配 IP 位址取代 II 的來源位址。
Action: mass	Extra Action Statistics verade	Ŧ	OK Cancel Apply Disable Comment	自動分配 IP 位址取代 II 的來源位址。
Action: mass	Extra Action Statistics verade	Ţ	OK Cancel Apply Disable Comment Copy	自動分配 IP 位址取代 II 的來源位址 。
Action: mass	Extra Action Statistics	Ţ	OK Cancel Apply Disable Comment Copy Remove	● 自動分配 IP 位址取代 II 的來源位址 。
Action: mss	Extra Action Statistics werade	Ţ	OK Cancel Apply Disable Comment Copy Remove Reset Counters	自動分配 IP 位址取代 II 的來源位址 。

Internet Protocol Version 4 (TC) 一般 如果您的網路支援這項功能, 則,您必須詢問網路系統管理	P/IPv4) 内容 ? 💽 您可以取得自動指派的 IP 設定。否 員正確的 IP 設定。	
<ul> <li>自動取得 IP 位址(0)</li> <li>使用下列的 IP 位址(3): IP 位址(1): 子網路遮罩(U): 預設開道(D):</li> </ul>	192 . 168 . 88 . 220 255 . 255 . 255 . 0 192 . 168 . 88 . 1	PC 網卡 IP 設定: IP 位址: 192.168.88.220/24 預設閘道: 192.168.88.1(設定在 lan 網卡的 IP)
<ul> <li>自動取得 DNS 伺服器位址</li> <li>使用下列的 DNS 伺服器位 慣用 DNS 伺服器(P):</li> <li>其他 DNS 伺服器(A):</li> </ul>	E(B) Σ址(E): 168 . 95 . 1 . 1  進階(∀)	
	確定取消	

測試 PC 線路是否正常?

利用命令提示字元, 輸入「ping 168.95.1.1」 測試線路是否正常。(時間有回應時間數值即線路正常)



# (d)Bridge 模式設定

#### 網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」以及「數據機」機器上。

<b>I</b>	nterfa	e List									
Inte	rface	Ethernet	EoIP Tunnel	IP Tunnel	VLAN	VRRP	Bonding	1			
+-	-	1	8 🖪 🍸	]							Find
	Name		🖌 Туре		Tx		Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
R	<b>«¦</b> >et	her1	Ethernet			O bps	O bps	0	0	0	0
R	et	her2	Ethernet			O bps	O bps	0	0	0	0
R	« >et	her3	Ethernet		16	.9 kbps	1624 bps	3	2	0	0
21											
3 iter	me										
- 1001											

# 此範例中「ether3」接至「Hub」故名稱定義為「lan」。

🔜 Interfa	ice <lai< th=""><th>1&gt;</th><th></th><th></th><th></th></lai<>	1>			
General ]	Ethernet	Status Tr	affic		OK
Na	ume: lau	n			Cancel
T	ype: Et	hemet			Apply
M MAC Add	TU: 15	500 ):D0:B7:B9:E	36:9B		Disable
A	RP: en	abled			Comment
					Torch
disabled		running	slave	link o	k

「ether2」接至「數據機」故名稱定義為「wan」。

Inter	face <	wan>				×	
General	Ether	net Sta	tus Traffi	ic		OK	
1	Name:	wan				Cancel	
	Туре:	Etherne	t			Apply	
MAC Ad	MTU: dress:	1500	87:B9:B6:9	)A		Disable	
ARP:	ARP:	enabled	Comment				
						Torch	
isabled		runni	ng	slave	link	ok	

# 設定橋接:Bridge

🔜 Bridge							5	<
Bridge Ports Filte	ers NAT Hosts							
+ - / ×	🖆 🍸 Setting	s					Find	
Name	∡ Туре	Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop	•
4								
0 items out of 3								-

🗖 Bridge							<	
Bridge Ports Filter	s NAT Hosts							
+ ×	C T Set	tings				Find		
Name	/ Туре	Tx	Rx	Tx P	ac Rx Pac Tx	Drops Rx Drop	-	
R 🗠wan_b	Bridge		O bps	O bps	0 0	0 0		
Gen Gen 1 item out of 4 (1	Interface <wan_b neral STP Status Name: Type: MTU: MAC Address: ARP: min. MAC Address:</wan_b 	Traffic wan_b Bridge 1500 enabled			OK OK Cancel Apply Disable Comment Copy Remove Torch	此名稱可自以默認値設	行定義。 定即可。	]
Bridge Bridge Ports Filters + - & X (1) Interface 1 1 lan 1 1 wan	NAT Hosts 7 Bridge wan_b wan_b	Priority ( Path 80 80	1 Cost Horizo 10 10	n Role designated I designated I	Root Path port		Find	
					- Mir			_
🔜 Bridge Port <lan></lan>			×	🔜 Bridge	Port <wan></wan>			×
General Status			OK	General St	atus		0	K
Interface: lan		Ŧ	Cancel	Interfa	ce: wan			ncel
Bridge: wan_b		Ŧ	Apply	Brid,	ge: wan_b		₹ Ap	ply
Priority: 80		hex	Disable	Priori	ty: 80		hex Dis	able
Path Cost: 10			Comment	Path Co	ost: 10		Com	iment
Horizon:		•	Сору	Horizo	on:		- Co	ру
Ed.ge: auto		Ŧ	Remove	Ed,	ge: auto		<b>∓</b> Ren	лоче
Point To Point: auto		₹		Point To Poi	nt: auto		Ŧ	
External FDB: auto		Ŧ		External FD	B: auto		Ŧ	
	欲使la	n網卡可接」	收到wan網	卡的IP資詞	汛,故將lan跟w	ran做橋接。		
disabled	inactive			disabled		inactive		

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#### 設定 IP 資訊:IP>Addresses

此範例中,廣域網路 IP 資訊為「61.65.72.0-61.65.72.127」。(因已將 lan 和 wan 做橋接, Public IP 可設在 lan 或 wan)



#### 設定一組 IP 給 wan 網卡。(61.65.72.126/25)





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### 設定預設閘道:IP > Routes

此範例中,廣域網路預設閘道為「61.65.72.125」。

Routes Rules	🔜 Route List						×
Image: Prode all     Image: Prode all       Destination     Gateway       Gateway     Gateway I Interface       DAC     61.65.72.0/25         Wan_b     0         61.65.72.0/25	Routes Rules						
Destination     /     Gateway     Gateway I     Interface     Distance     Routing Mark     Pref. Source       DAC     ▶ 61.65.72.0/25     wan_b     0     61.65.72.126	+ - 🖉 💥 🕻					Find	all Ŧ
DAC ▶61.65.72.0/25 wan_b 0 61.65.72.126	Destination /	Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. Source 💌
Routes Rules Pestination Gateway Gateway IInterface Distance Routing Mark Pref. Source V AC 61.65.72.0/25 wan_b 0 61.65.72.126							
	▲ 1.ikuu						•

🗖 Route List					×
Routes Rules					
+- ** 6 7				Find	all ∓
Destination / Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. Source -
DAC P01.05.12.0125		wan_b			01.05.72.120
New Route				×	
General Attributes	3			OK	
Destination:	5       wan_b       0       61.65.72.126         New Route       OK         neral Attributes       OK         Destination:       0.0.0.0/0         Gateway:       61.65.72.125         way Interface:       O         Interface:       Comment         Check Gateway:       Copy         Type:       wicast         Distance:       ▼         Scope:       30				
Gateway:	61.65.72.125		•	Apply	
Gateway Interface:	▼ Find all   teway Gateway I Interface Distance Routing Mark   wan_b 0 61.65.72.126   oute ✓   Atmibutes OK   ination: 0.0.0.0/0   ateway: 61.65.72.125   oterface: Image: Comment   ateway: ✓   Type: Unicast   vistance: ✓   Scope: 30   tscope: 10   g Mark: ✓				
<ul> <li>Find all</li> <li>Destination / Gateway</li> <li>Gateway</li> <li>G</li></ul>					
Check Cotumer	l			Comment	
Check Galeway.				Сору	ind all F fark Pref. Source C 61.65.72.126
Interface:       Interface:       OK         Comment       Comment         Check Gateway:       Interface:         Interface:       Interface:         Disable       Copy         Type:       Interface:         Distance:       Interface:         Item       Scope:         30       Target Scope:					
Distance:			-		•
I nem Scope:	30				
Target Scope:	10				
Routing Mark:			•		
Pref. Source:			-		
disabled			ective		

#### Ping 測試工具: Tools > Ping

測試線路是否正常?以中華電信 DNS 的 IP (168.95.1.1) 爲測試點。Time 出現回應值即線路正常。

Interface: any		Ping To: 168.95.1.1					
		Ŧ	Close	Close			
ARP Ping							
Packet Count:			•	New Window	V		
Timeout: 1000			ms				
# Host Time Re	Reply Size T		Status	8	-		
0 168.95.1.1 14ms	50	244		N.	10000		
1 168.95.1.1 9ms	50	244					
2 168.95.1.1 10ms	50	244					
3 168.95.1.1 9ms	50	244					
4 168.95.1.1 10ms	50	244					
5 168.95.1.1 12ms	50	244					
6 168.95.1.1 10ms	50	244					



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測試 PC 線路是否正常?

利用命令提示字元, 輸入「ping 168.95.1.1」 測試線路是否正常。(時間有回應時間數值即線路正常)



# 三、雙線負載均衡

#### (a)分流模式設定

網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」、「專線設備」和「ADSL 數據機」上。

inte:	rface Ethernet	EoIP Tunnel	IP Tunnel	VLAN	VRRP	Bonding					
+-	2									Find	
	Name	🗡 Туре		Tx		Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop	•
2	ether1	Ethernet			O bps	O bps	0	0	0	C	ŗ
5	ether2	Ethernet			O bps	O bps	0	0	0	C	J
2	ether3	Ethernet		16	9 kbps	1624 bps	3	2	0	C	I
此範例中「ether3」接至「Hub」故名稱定義為「lan」。

Inter	face <	lan>			×
General	Ether	met Status	Traffic	0	К
1	Name:	lan		Can	ıcel
	Туре:	Ethernet		Ap	ply
MAC Ad	MTU: dress:	1500 00:D0:B7:B	9·B6·9B	Diss	ble
	ARP:	enabled		₹ Com	ment
				То	ch
isabled		running	slave	link ok	

「ether2」接至「專線設備」故名稱定義為「wan」。

General	Ether	net Status Trai	ffic		OK
N	ame:	wan			Cancel
Т	ype:	Ethernet			Apply
M	(TU:	1500			Disable
MAC Add	ress:	00:D0:B7:B9:B6	5:9A		Comment
1	IKF.	enabled		•   -	Torch

「ether1」接至「ADSL 數據機」故名稱定義為「adsl」。

Interface	<ether1></ether1>	X
General Ethe	rnet Status Traffic	OK
Name:	adsl	Cancel
Туре:	Ethemet	Apply
MTU:	1500	Disable
MAC Address:	00:14:2A:2A:67:99	Comment
ARP:	enabled 🐺	
		Torch

設定 PPPoE 撥接: ➡▼ > PPPoE Client

🔜 Interf	ace List										
Interface	Ethernet	EoIP Tu	nnel	IP Tunnel	VLAN	VRRP	Bonding				
+		8	T								Find
EoIP T	unnel	⊿ Ту	ре		Tx	:	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
IP Tun	nel	Etł	nemet			O bps	O bps	0	0	0	0
VLAN		Et	remet		35	32.7 kbps	5.6 kbps	11	6	0	0
VRRP		EU	lemei			U DDS	U Dps	U	U	U	U
Bondin	g										
Bridge											
Mesh											
Virtual	Ethernet										
6to4											
VPLS											
PPP Se	rver										
PPP Cl	ient										
PPTP S	erver										
PPTP C	lient										
L2TP S	erver										•
L2TP C	Client		_		_						
OVPN	Server										
OVPN	Client										
PPPoE	Server										
PPPoE	Client										
ISDN S	erver										
ISDN C	Client										
Framer	elay PVC										
Virtual	AP										



New Interface	X	
General Dial Out Status Traffic	ОК	
Service: 📃 👻	Cancel	
AC Name:	Apply	
User: test1234@hinet.net	Disable	輸入 ISP 配發的帳號及密碼。
Password: ******	Comment	
Profile: default	Сору	
Dial On Demand	Remove	取消 Add Default Route,才不會自動導向路由器。
✓ Use Peer DNS	Torch	使用路由器默認 DNS 給 ppp 的 DNS。
- Allow	Scan	
🖌 pap 🔽 chap		
✓ mschap1 ✓ mschap2		

🗾 In	terface List							×
Interf	ace Ethernet Eo	IP Tunnel IP Tunnel VI	LAN VRRP	Bonding	1			
+-								Find
	Name	Туре	Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
R	adsl	Ethernet	O bps	O bps	0	0	0	0
R	<;>lan	Ethernet	39.4 kbps	5.6 kbps	10	6	0	0
R	«-»pppoe-outl	PPPoE Client	0 bps	O bps	0	0	2	0
R	<b>∢</b> ≯wan	Ethernet	0 bp	O bps	0	0	0	0
		pppoe-out1 前	T面出現「R」	」即撥號成	功。			

# 設定橋接:Bridge

📃 Bridge						×
Bridge Port	s Filters NAT Hosts					
+ - ~	🖉 🛞 🖆 🍸 Settings					Find
Name	🔨 Туре	Tx	Rx	Tx Pac	Rx Pac	Tx Drops Rx Drop 🔻
•						•
0 items out of 4	4					

(因為 PC 的 IP Address 跟廣域網路 IP 資訊「61.65.72.0-61.65.72.127」,同一個區段,故做橋接)

🔜 Bridge				
Bridge Ports Filte:	rs NAT Hosts		Fina	<i>i</i>
Name	/ Туре	Tx Rx Tx P	ac Rx Pac Tx Drops Rx D	rop
I item out of 5 (1 sele	Interface <wan_b) General STP Status Name: Type: MTU: MAC Address: ARP: Admin. MAC Address:</wan_b) 	Traffic wan_b Bridge 1500 enabled	OK     此名       Apply     Disable       Comment     以默       Copy     Remove       Torch     Intervel	稱可自行定義。 認值設定即可。
	uisabieu	lanning larave		

Bridge					X
Bridge Ports Filters NAT Hosts					Find
Name / Type R 1=1wan_b Bridge	Tx O bps	Rx O bps	Tx Pac O	Rx Pac O	Tx Drops Rx Drop 🔻 0 0
■ Bridge Setti Use IP Firewa Use IP Firewa Use IP Firewa	ngs 11 11 For VLAN 11 For PPPoE	OK Cancel Apply		橋接模式 勾選「U 才能達到	式下設定分流一定 Jse IP Firewall」, 到分流效果。
✓ I item out of 5 (1 selected)					Þ

× Bridge Bridge Ports Filters NAT Hosts **a** 7 ÷ -4 × Interface Bridge Priority (... Path Cost Horizon Role Root Path .... • 80 4-Alan wan\_b 10 designated port designated port 44wan 80 10 wan b 📃 Bridge Port <lan> × 🔜 Bridge Port <wan> × General Status General Status OK OK Interface: wan Interface: lan Ŧ Ŧ Cancel Cancel Bridge: wan\_b Bridge: wan\_b Ŧ Ŧ Apply Apply Priority: 80 Priority: 80 hex hex Disable Disable Path Cost: 10 Path Cost: 10 Comment Comment Horizon: -Horizon: ¥ Сору Сору Remove Ŧ Remove Ŧ Edge: auto Edge: auto Point To Point: auto Ŧ Point To Point: auto Ŧ External FDB: auto Ŧ External FDB: auto Ŧ 欲使lan得到wan的IP資訊,所以要將lan跟wan做橋接。

#### Use IP Firewall 設定: Bridge > Settings (勾選 Use IP Firewall)

#### 設定 IP 資訊:IP>Addresses

此範例中,廣域網路 IP 資訊為「61.65.72.0-61.65.72.127」。(因為已將 lan 跟 wan 做橋接, Public IP 可設在 lan 或 wan)

X			Address List
Find			• - 🕫
nterface 🗸 🔻	Broadcast	V Network	Address
iterface	Broadcast	/ Network	Address
iterface 🛛 🗨	Broadcast	/ Network	Address

#### 設定一組 IP 給 wan 網卡。(61.65.72.126/25)



- 🗸 >		T				Ein
Address	/ Ne	etwork	Broadcas	t	Interface	
₽61.65.72.	126/25 61	65.72.0	61.65.72	.127	wan	
6						
	Addre	ss <61.65.7	2.126/25>		×	
	Address:	61.65.72.12	6/25	OK		
	Network:	61.65.72.0	<b></b>	Cano	el	
H	Broadcast:	61.65.72.12	7	App	ly	
	Interface:	wan	₹	Disal	ole	
				Comm	nent	
				Cop	y	
				Remo	ove	

#### 設定一組 IP 給 adsl 網卡。(PPPoE 撥號)

	Address List				X
÷		T		Fi	nd
	Address /	Network	Broadcast	Interface	-
	<b>⊕</b> 61.65.72.126/25	61.65.72.0	61.65.72.127	wan	
D	<b>宁</b> 218.162.133.140	218.162.120.254		pppoe-outl	
2 iter	ns				

PPPoE 撥號取得動態 IP。(D 代表動態)

# 路由標記設定: IP>Firewall>Mangle (範例中,將 HTTP 跟 FTP 路由導向 ADSL 線路)

_ Fi	rewa	n										×
Filter	Rules	NAT	Mangle	Ser	vice Ports	Connections	Address Lists	Layer7	Protocols			
+	-		e	7	ar Res	et Counters	oo Reset All	Counters	E	ind	all	Ŧ
#	1	Action	Chain		Src. Addre	ess Dst. Add:	ress Proto S	Src. Port	Dst. Port	In. Inte	. Out. Int	. E 🕶
-												
•												•
) item:	s											

#### HTTP – 連接標記

🔜 New Mangle Rule	X	
General Advanced Extra Action Statistics	OK	
Chain: prerouting <b>F</b> Src. Address: <b>F</b>	Cancel Apply	路由前。(常用於標記「策略路由」和 「端口路由」)
Dst. Address:	Disable	
Protocol: 6 (tcp) 🗸 🔺	Comment	
Src. Port:	Сору	定義 http 協定。
Dst. Port: 80	Remove	(Protocol : tcp Dsr-port : 80)
Any. Port:	Reset Counters	
rzr:	Reset All Counters	
In. Interface: wan_b		· 選取數據封包進入的網卡介面。
Out. Interface:		(軛例中已將 lan 和 wan 備按, 故此選
Packet Mark:		取備按之虛擬網卡 - wan_b)
Connection Mark:		
Routing Mark:		
Connection Type: ▼ Connection State: ▼		
disabled		
🔜 New Mangle Rule	×	
General Advanced Extra Action Statistics	OK	
Action: mark connection	Cancel	
New Connection Mark: http_con	Apply	■ 取定建致标记、有得时日11定我。 Passthrough认须尔器。(因質性相則量
✓ Passthrough	Disable	袖以下規則引用。)
	Comment	
	Сору	
	Remove	



## HTTP-路由標記

🔲 New Mangle Rule		×	
General Advanced Extra Action Sta	atistics	ОК	
Chain: prerouting	Ŧ	Cancel	
Src. Address:	<b>•</b>	Apply	
Dst. Address:	<b>•</b>	Disable	
Protocol:	•	Comment	
Src. Port:	•	Сору	
Dst. Port:	~	Remove	
Any. Port:	~	Reset Counters	
P2P:	<b>•</b>	Reset All Counters	
In. Interface: wan_b	<b>.</b>		
Out. Interface:			
Packet Mark:	•		
Connection Mark: http_con			参照「連接標記」,無須再設定 http 協定。
Routing Mark:	•		
Connection Type:	•		
Connection State:			
disabled			

New Mangle Rule			×	
General Advanced H	Extra Action Statistics		OK	
Action:	mark routing	Ŧ	Cancel	設定路
New Routing Mark:	AD	₹	Apply	Passtnr 需要被
	Passthrough		Disable	
			Comment	
			Сору	
			Remove	
			Reset Counters	
			Reset All Counters	

設定路由標記,名稱可自行定義。 Passthrough取消勾選。(因為此規則不 需要被以下規則引用。)

HTTP-封包標記 (主要用於針對已提出 HTTP 封包做限制流量頻寬)

General	Advanced	Extra	Action	Statistics		OK
	Chain:	preroutin	g		Ŧ	Cancel
Src.	Address:				]•	Apply
Dst.	Address: [				]•	Disable
	Protocol: [				•	Comment
	Src. Port: [				•	Сору
	Dst. Port: [				-	Remove
Į	uny. Port: [				] • [	Reset Counters
	<b>P2P</b> : [				•	Reset All Counters
In.	Interface: [				]•	der.
Out.	Interface: [				]•	
Pac	ket Mark: [				•	
Connecti	on Mark: [	http_c	on	Ŧ		
Routi	ng Mərk: [				]•	
Connect	ion Type:				]•	
Connect	ion State: [				•	



設定封包標記,名稱可自行定義。 Passthrough取消勾選。(因為此規則不 需要被以下規則引用。)

#### FTP- 連接標記

New Mangle Rule	×	
General Advanced Extra Action Statistics	OK	
Chain: prerouting 🗧	Cancel	路由前。(常用於標記「策略路由」和
Src. Address: 📃 🔻	Apply	「端口路由」)
Dst. Address:	Disable	
Protocol: 🗌 6 (tcp) 🐺 🔺	Comment	定義 ftp 協定。
Src. Port:	Сору	(Protocol : tcp Dsr-port : 20-21)
Dst. Port: 20-21	Remove	
Any. Port: 📃 🔻	Reset Counters	
P2P: 🔻	Reset All Counters	
In. Interface: wan_b 🔻 🔺		- 選取數據封包進入的網卡介面。
Out. Interface:		(範例中已將 lan 和 wan 橋接,故此選
Packet Mark		取橋接之虛擬網卡 - wan_b)
Connection Mark:		
Routing Mark:		
Connection Type:		
Connection State:		
disabled	1	
		l



#### FTP-路由標記

Jeneral Advanced Extra Action Statistics OK   Chain: prerouting Image: Cancel   Str. Address: Image: Cancel   Dist. Address: Image: Cancel   Dist. Address: Image: Cancel   Protocol: Image: Cancel   Protocol: Image: Cancel   Str. Port Image: Cancel   Str. Port Image: Cancel   Str. Port Image: Cancel   Disable Image: Cancel   Protocol: Image: Cancel   Str. Port Image: Content   Str. Port Image: Cancel   Any. Port Image: Cancel   In Interface: Image: Image: Cancel   In Interface: Image: Image: Cancel   In Interface: Image: Image: Cancel
Chain: prerouting   Src. Address: <ul> <li>Apply</li> </ul> Dst. Address: <li>Disable</li> Protocol: <ul> <li>Comment</li> <li>Copy</li> </ul> Src. Port <li>Copy</li> <li>Remove</li> Any. Port P2P:    In. Interface: wan_b   Out Interface:
Srr. Address: Apply   Dst. Address: Disable   Protocol: Comment   Srr. Port Copy   Dst. Port Remove   Any. Port Reset Counters   P2P: Reset All Counters   In. Interface: wan_b
Dst. Address: <ul> <li>Disable</li> <li>Comment</li> </ul> Protocol: <li>Copy</li> <li>Copy</li> <li>Dst. Port</li> <li>Copy</li> <li>Remove</li> <li>Remove</li> <li>Any. Port</li> <li>P2P:</li> <li>Reset Counters</li> <li>Reset All Counters</li> In. Interface: wan_b
Protocol: <ul> <li>Comment</li> <li>Copy</li> </ul> Sn. Port <li>Dst. Port</li> <li>Any. Port</li> <li>P2P:</li> <li>In. Interface:</li> <li>wan_b</li> Out Interface:     Particular     Comment   Copy   Remove   Reset Counters   Reset All Counters
Srr. Port   Dst. Port   Any. Port   P2P:   In. Interface:   wan_b
Dst. Port Remove Any. Port Reset Counters P2P: Reset All Counters In. Interface: wan_b
Any. Port Reset Counters P2P: Reset All Counters In. Interface: wan_b
P2P: In. Interface: wan_b Out Interface:
In. Interface: wan_b
Out Interface
our menace.
Packet Mark:
Connection Mark: ftp_con
Routing Mark:
Connection Type:
Connection State:
sabled
New Mangle Rule
Jeneral Advanced Extra Action Statistics OK
Action: mark routing <b>天</b> Cancel 設定路由標語
New Routing Mark: AD Passthrough 国本いてお
Disable 前安牧以下》
Comment
Сору
Remove
Reset Counters
Reset & Il Counters
Reat All Councis

# FTP - 封包標記 (主要用於針對已提出 FTP 封包做限制流量頻寬)

General Advanced Extra Action Statistics       OK         Chain: prerouting       Cancel         Src. Address:       Apply         Dst. Address:       Disable         Protocol:       Comment         Src. Port       Copy         Dst. Port       Remove         Any. Port       Reset Counters         P2P:       Reset All Counters         Dut. Interface:       V         Out. Interface:       V         Packet Mark:       V         Routing Mark:       V         Connection Type:       V	
Chain: prerouting Cancel   Src. Address: Apply   Dst. Address: Disable   Protocol: Comment   Src. Port Copy   Dst. Port Remove   Any. Port Reset Counters   P2P: Reset All Counters   P2P: Reset All Counters   P2P: Reset All Counters   P2P: Reset All Counters   Packet Mark: Packet Mark:   Connection Mark: [ftp_con]   Routing Mark: Packet Mark:	
Src. Address: <ul> <li>Apply</li> <li>Disable</li> <li>Disable</li> </ul> Protocol: <ul> <li>Comment</li> <li>Src. Port</li> <li>Copy</li> <li>Det Port</li> <li>Remove</li> </ul> Any. Port <ul> <li>Reset Counters</li> <li>P2P:</li> <li>Reset All Counters</li> <li>P2P:</li> <li>Reset All Counters</li> <li>P2P:</li> <li>Reset All Counters</li> <li>Packet Mark:</li> <li>Packet Mark:</li> <li>Ftp_con</li> <li> <li>Routing Mark:</li> <li> <li>Connection Type:</li> <li> </li> <li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></ul>	
Dst. Address: <ul> <li>Disable</li> <li>Comment</li> <li>Str. Port</li> <li>Copy</li> <li>Dst. Port</li> <li>Copy</li> <li>Dst. Port</li> <li>Remove</li> <li>Any. Port</li> <li>Reset Counters</li> <li>P2P:</li> <li>Reset All Counters</li> <li>Reset All Counters</li> <li>Packet Mark:</li> <li>Connection Mark:</li> <li>[ftp_con]</li> <li>(Ftp_con]</li> <li>(Ftp_con]</li> <li>(Ftp_con]</li> <li>(Ftp_con)</li> <li>(Ftp_con)</li></ul>	
Protocol: <ul> <li>Comment</li> <li>Sxn. Port</li> <li>Copy</li> </ul> Dat Port <ul> <li>Remove</li> </ul> Any. Port <li>P2P:</li> <li>Reset All Counters</li> <li>P2P:</li> <li>Reset All Counters</li> <li>Ruina face:</li> <li> <ul> <li>Packet Mark:</li> <li>Connection Mark:</li> <li>ftp_con</li> <li>Aution Mark:</li> <li>Connection Type:</li> <li>Interface:</li> </ul> <ul> <li>Market Mark:</li> <li>Connection Type:</li> <li>Interface:</li> <li></li></ul></li>	
Sre. Port Copy   Dst Port Remove   Any. Port Reset Counters   P2P: Reset All Counters   P2P: Reset All Counters   Dut. Interface: Image: Connection Mark:   Packet Mark: Packet Mark:   Connection Mark: ftp_con   Routing Mark: Image: Connection Type:	
Dst. Port Any. Port Reset Counters P2P: Reset All Counters Dut. Interface: Packet Mark: Packet Mark: Connection Mark: ftp_con w Connection Type:	
Any Port P2P: Reset All Counters P2P: In. Interface: Out. Interface: Packet Mark: Packet Mark: Connection Mark: ftp_con Routing Mark: Connection Type: Connection Type:	
P2P: In. Interface: Out. Interface: Packet Mark: Connection Mark: Routing Mark: Connection Type:	
In. Interface: Out. Interface: Packet Mark: Connection Mark: ftp_con Kouting Mark: Connection Type: Connect	
Out. Interface:       ▼         Packet Mark:       ▼         Connection Mark:       ftp_con         Routing Mark:       ▼         Connection Type:       ▼	所以無需再
Packet Mark:       ▼         Connection Mark:       ftp_con         Routing Mark:       ▼         Connection Type:       ▼	ADSL 線
Connection Mark: ftp_con  ftp_con  Kouting Mark: Connection Type:	
Routing Mark:	;定 ftp 協定
Connection Type:	
Connection Type:	
Connection State:	
isabled	
General Advanced Extra Action Statistics	
Action: mark packet	定義。
New Packet Mark: ftp packet • Cancer Passthrough取消勾選。(因為)	北規則不需
▲ Apply 被以下規則引用。)	
Disable	
Comment	
Сору	
Remove	
Reset Counters	
Reset All Counters	

## 設定預設閘道:IP > Routes

此範例中,廣域網路預設閘道為「61.65.72.125」; ADSL 預設閘道為「218.162.120.254」。

🗖 Route List							(	×
Routes Rules								
+ - 🛛 🗶 🖾	T				Find		all	Ŧ
Destination 7	Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. S	Source	-
DAC 61.65.72.0/25			wan_b	C	li -	61.65	72.126	
DAC 218.162.120.254			pppoe-out1	C	l)	218.16	52.131.	.66

新增廣域網路預設閘道「61.65.72.125」。(61.65.72.125 為靜態路由)

🗖 Route List						×
Routes Rules						
				Find	all	Ŧ
Destination 🕢 Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. Source	-
DAC 61.65.72.0/25		wan_b		0	61.65.72.12	:6
DAC 218.162.120.254		pppoe-out1		0	218.162.13	1.66
New Koute						
General Attribute	s		1	OK		
Destination:	0.0.0/0			Cancel		
Gateway:	61.65.72.125		<b>+</b>	Apply		
Gateway Interface:			<b></b>	Disable		
Interface				Comment		
Charle Cotoware	L			Comment		
Check Galeway.				Copy		
2 items Type:	unicast		<b>•</b>	Remove		****
Distance:	-		•			
Scope:	30					
Target Scope:	10					
Routing Mark	1					
Koumig Hark.						
Pref. Source:			-			
disabled		1	active			

# 新增 ADSL 預設閘道為「218.162.120.254」。(218.162.120.254 為策略路由)

🗖 Route List									1	×
Routes Rules										
+ - • × 🗂	7							Find	all	Ŧ
Destination	/ Gateway	Gateway I	Interface	Distance	Routing Mark	Pref. Source				-
AS 0.0.0.0/0	61.65.72.125		wan_b	1						
	218.162.120.254		pppoe-outl		. AD	61 65 70 106				
DAC P01.05.72.0725			wan_p		)	210 162 122				_
DAC P 210.102.120.204			pppoe-ouri		,	210.102.199				_
Route <0.0.0.0/0>				🗖 Addre	ess List					×
General Attributes			OK	+ -		T			Find	
Destination: 0.0.0.0/0			Cancel	Add	lress 51 65 72 126/25	/ Network	Broadcast	Interface way	113	-
Gateway: 218.162.1	20.254	\$	Apply	D 🕂	218.162.133.140	218.162.120.25	4	pppoe-out1		
Gateway Interface:		\$	Disable							
Interface: pppoe-ou	t <b>1</b>		Comment			V				
Check Gateway:		-	Сору	PPPo	E 撥號取得	的「Network	-IP」即是 PP	PoE 的預調	役閘道	IP •
Type: unicast		Ŧ	Remove							
Distance: 1										
Scope: 30						, t _ t				
Target Scope: 10				選取	已在 Mang	le 設定標記錄	各由名稱。(	louting-Ma	rk 是將	等定
Routing Mark: AD		Ŧ Ŧ		義好	的 HTTP 及	FTP導入A	DSL 路由中	)		
Pref. Source:		•		2 items						
disabled	active	static								

#### 設定 Rules : IP > Routes > Rules

	Route	List					×
Rot	utes 1	Rules					
÷		V X E	7				Find
#		Src. Address	Dst. Address	Routing Mark Interface	Action	Table	-
	840						
0 ite	ms						

🔲 Route List					
Routes Rules					
+ - / × 2	T				Find
# Src. Address	Dst. Address	Routing Mark Interface	Action	Table	-
	🔲 New Poli	cy Routing Rule	×		
	Src. Address	: <b></b> ▼	OK		
	Dst. Address	:	Cancel		
	Routing Mark	: AD 🔻 🔺	Apply	將定義好的路	由標記名稱 (AD),再一次回
	Interface	:	Disable	到 AD 路由表	中去尋找閘道。
	Action	: lookup ∓	Comment		
	Table	: AD 두	Сору		
			Remove		
0 items	disabled				

#### 設定 NAT: IP > Firewall > NAT

📃 Firewa	ш											×
Filter Rule	s NAT	Mangle	Ser	vice Ports Co	nnections	Ad	dress Lis	ts Layer7	Protocols			
+ -	× ×		7	🞏 Reset C	Counters	00	Reset A	ll Counters	Fi	nd	all	Ŧ
#	Action	Chain		Src. Address	Dst. Adda	ress	Proto	Src. Port	Dst. Port	In. Inte	. Out. Int.	. 🔻
4												
0 items			_									8



# Ping 測試工具: Tools > Ping

測試線路是否正常?以中華電信 DNS 的 IP (168.95.1.1) 為測試點。Time 出現回應值即線路正常。

General Advanced					_	L	Ping									
Ping To: 168.95.	1.1						Stop									
Interface: any					Ŧ		Close									
ARP	Ping						T. 11T. 1									
Packet Count:					•		vew wind	ow								
Timeout: 1000					ms											
# Host		lime .	Renly Size	TTL.	Status	\$										
0 168.95.1.1	1	Oms	50	244	NUCC	~		1830								
1 168.95.1.1	1	Oms	50	244												
2 168.95.1.1	1	Oms	50	244												
3 168.95.1.1	1	Oms	50	244												
4 168.95.1.1	1	Oms	50	244												
5 168.95.1.1	1	.Ums	50	244												
0 100.99.1.1		UIIIS	50	244												
7 of 7 packets received	0% packet los	8	Min: 10ms	Avg:	10ms	8	Max: 10m	15								
7 of 7 packets received internet Protocol (TC	0% packet loss ?//IP) 內容	8	Min: 10ms	Avg:	10ms	5	Max: 10m	15								
7 of 7 packets received Internet Protocol (IC 一般	0% packet los P/IP) 內容	\$	Min: 10ms	Avg:	10ms	3	Max: 10m	IS								
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這	0% packet loss ?/IP) 內容 項功能,您可以取	得自動	Min: 10ms 指派的 IP 設定	Avg: ?	10ms	3	Max: 10m	15								
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網麗	0% packet loss ?/IP) 內容 項功能,您可以取 系統管理員正確的	。 得自動 IP設定	Min: 10ms 指派的 IP 設定	Avg: ? :• 否	10ms	3	Max: 10m	15								
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路	0% packet loss ?//IP)內容 項功能,您可以取 系統管理員正確的 上(O)	。 得自動 IP設定	Min: 10ms 指派的 IP 設定	Avg: ? : 否	10ms	5	Max: 10m	21								
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ① 自動取得 IP 位功 ① 自動取得 IP 位功	0% packet loss P/IP)內容 項功能,您可以取 系統管理員正確的 上( <u>O</u> ) 7址(S):	。 得自動 IP設定	Min: 10ms 指派的 IP 設定	Avg: ? ?• 중	10ms	8	Max: 10m	15								
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ① 自動取得 IP 位力 ① 使用下列的 IP ( IP 位址(I):	0% packet loss ?/(IP) 內容 項功能,您可以取 系統管理員正確的 上(O) 2址(S):	。 得自動 IP設定 51.65	Min: 10ms 指派的 IP 設定	Avg: ?	10ms	8	Max: 10m	₽ E	設	Ĩ						
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援演 則,您必須詢問網路 ① 自動取得 IP 位 ① 自動取得 IP 位 ① 使用下列的 IP ( IP 位址①: 子網路渡賀(II)	0% packet loss ?/IP) 內容 項功能,您可以取 系統管理員正確的 上( <u>0</u> ) 之址( <u>5</u> ):	。 得自動 IP設定	Min: 10ms 指派的 IP 設定	Avg: ? :• 否	10ms	3	Max: 10m PC 網- IP 位山	ts trip t	設:	定: 5.72	2.10	/25				
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ○ 自動取得 IP 位功 ○ 使用下列的 IP ( IP 位址①: 子網路遮罩①: 預診開意の):	0% packet loss P/IP)内容 項功能,您可以取 系統管理員正確的 上(0) 立址(3): 〔 〔 2 〕	。 得自動 IP設定 51 . 65 55 . 25.	Min: 10ms 指派的 IP 設定 。 5 . 72 . 10 5 . 255 . 128	Avg: ? : 否	10ms	8	Max: 10m PC 網- IP 位坦 預設購	↓ IP 二:6 二:6	設:	定: 5.72	2.10	/25	9 完在	wan	細生	「竹田」
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ④ 自動取得 IP 位 ① 使用下列的 IP ( IP 位址①: 子網路遮罩①): 預設開道①):	0% packet loss P/IP)內容 項功能,您可以取 系統管理員正確的 上(O) 立址(S): 〔 〔 〔 〔 〔	得自動 IP設定 51.65 55.255	Min: 10ms 指派的 IP 設定 。 、72 、10 5、255、128 。 、72 、126	Avg: ? ? 否	10ms	3	Max: 10m PC 網- IP 位址 預設閘	⊧ 上:6 [〕:(	設) 1.65 51.6	定: 5.72 5.7	2.10	/25 26 (影	设定在	÷wan	網卡師	钓 <b>I</b> F
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ④ 自動取得 IP 位功 ④ 使用下列的 IP 付 IP 位址(1): 子網路遮罩(1): 預設開道(12): ④ 自動取得 DNS {	0% packet los P/IP) 內容 項功能,您可以取 系統管理員正確的 上(①) 立址(⑤): 〔6 2 〔7 服器位址(图)	。 得自動 IP設定 51.65 55.25 51.65	Min: 10ms 指派的 IP 設定 5 . 72 . 10 5 . 255 . 128 5 . 72 . 126	Avg: ۲۰۳۲	10ms	\$	Max: 10m PC 網- IP 位址 預設閘	↓ IP - : 6 ]道:(	設) 1.6: 51. <del>6</del>	定: 5.72 55.7	2.10 2.11	/25 26 ( <b></b> ]	设定在	Ewan	網卡印	钓IF
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網麗 ④ 自動取得 IP 位 ① 使用下列的 IP ( IP 位址①: 子網路遮罩①: 預設開道①: ④ 自動取得 DNS ( ● 使用下列的 DN	0% packet los P/IP)內容 項功能,您可以取 系統管理員正確的 上(O) 立址(S): 〔 日 日 服器位址(B) 5 (伺服器位址(E):	。 得自動 IP設定 51 . 65 55 . 25 51 . 65	Min: 10ms 指派的 IP 設定 、72 . 10 5 . 255 . 128 5 . 72 . 126	Avg: ? ? 종	10ms	3	Max: 10m PC 網- IP 位址 預設閘	↓ ↓ · · · 6 〕道:(	設) 1.6: 51. <del>6</del>	定: 5.72 5.7	2.10	/25 26 (謬	设定在	Ewan	網卡印	钓旺
7 of 7 packets received Internet Protocol (TC 一般 如果您的網路支援這 則,您必須詢問網路 ④ 自動取得 IP 位 「 位址①: 子網路遮罩①: 預設開道①: ④ 使用下列的 DN 個用下列的 DN 個用 DNS 伺服器(	0% packet los P/IP) 內容 項功能,您可以取 系統管理員正確的 上(①) 立址(③): 〔 ① 印服器位址(B) 5 伺服器位址(B): [〕: 1]	。 得自動 IP 設定 55 . 25: 51 . 65 58 . 95	Min: 10ms 指派的 IP 設定 5 . 72 . 10 5 . 255 . 128 5 . 72 . 126	Avg: ? * 否	10ms	3	Max: 10m PC 網- IP 位址 預設閘	↓ IP : 6 ]道:(	設 1.6: 51. <del>6</del>	宦: 5.72	2.10	/25 26 (武	设定在	wan	網卡印	約Ⅱ

取消

進階(♡)...

確定

測試 PC 線路是否正常?

利用命令提示字元, 輸入「ping 168.95.1.1」 測試線路是否正常。(時間有回應時間數值即線路正常)



測試 HTTP 分流是否成功:開啓 Hinet 測速網頁 (URL: http://www.hinet.net/support/testspeed.html)

HiNet 客服公告			
您目前電腦使用的 IP 位	址爲:218.162.133.140	IP 位址	和ADSL撥接動態取得IP位址相
測試結果:非常好,您	的電腦應該不會被當成廣行	告信跳板(測調) 同,則	HTTP分流成功導入ADSL線路中。
Address List			
+ - XX Y	ork Broadcast	Find	
	62.120.254	wan pppoe-out1	
	=	ルウウロ	
	<b>1</b>	又化元	Х <sup>×</sup>

## (b)備援模式設定

(此範例中,以「分流」和「雙線備援」設定為範本,關於「分流」部份請參照 P.33 <u>分流模式設定。</u>)

網卡介面:Interface

網卡名稱默認值為「ether1-ether3」,線路分別接至「Hub」、「專線設備」和「ADSL數據機」上。

<u> </u>	nterface List									
Inter	dace Ethernet	EoIP Tunnel	IP Tunnel	VLAN	VRRP	Bonding				
+-										Find
	Name	🔬 Туре		Tx		Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
R	ether1	Ethernet			O bps	O bps	0	0	0	0
R	ether2	Ethernet			O bps	O bps	0	0	0	0
R	ether3	Ethernet		16	9 kbps	1624 bps	3	2	0	0
										•
3 iter	ns									

此範例中「ether3」接至「Hub」故名稱定義為「lan」。

General	ace <	lan>		9	×
Generar	Emer	net status in	anc		OK
N	ame:	lan			Cancel
1	Гуре:	Ethernet			Apply
ŀ	ATU:	1500			
MAC Add	lress:	00:D0:B7:B9:B	6:9B		Disable
	ARP:	enabled		<b>T</b>	Comment
					Torch
lisabled		running	slave	link ol	ς

「ether2」接至「專線設備」故名稱定義為「wan」。

Interface	<wan></wan>			×
General Ether	met Status Tra	effic	OF	:
Name:	wan			el
Туре:	Ethernet		App	ly
MTU:	1500		Disal	ble
MAC Address: ARP·	00:D0:B7:B9:B	6:9A	- Comm	nent
			Ton	ch

「ether1」接至「ADSL數據機」故名稱定義為「adsl」。

Interfac	e <	ether1 >			2
General Et	them	iet Status Tra	offic		OK
Nan	ne: [	adsl			Cancel
Туд	pe: [	Ethernet			Apply
MT	'U: [	1500			Dicable
MAC Addre	ss:	00:14:2A:2A:67	7:99		Commont
AR	RP: [	enabled		₹	Comment
					Torch

# 設定 PPPoE 撥接: ➡▼ > PPPoE Client

Interface List									
Interface Ethernet Eo	IP Tunnel	IP Tunnel	VLAN	VRRP	Bonding				
<b>+</b> • - 🖉 🐹	27								Find
EoIP Tunnel	/ Туре		Tx		Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
IP Tunnel	Ethernet			O bps	O bps	0	0	0	0
VLAN	Ethernet		32	.7 kbps	5.6 kbps	11	6	0	0
VRRP	Ememer			o ops	0 ops	U	U	U	U
Bonding									
Bridge									
Mesh									
Virtual Ethernet									
6to4									
VPLS									
PPP Server									
PPP Client									
PPTP Server									
PPTP Client									
L2TP Server									<u> </u>
L2TP Client	_		_	_	_	_	_	_	
OVPN Server									
OVPN Client									
PPPoE Server	_								
PPPoE Client									
ISDN Server									
ISDN Client									
Framerelay PVC									

New Interface		×	
General Dial Out Status Traffic		OK	
Name: pppoe-outl		Cancel	名稱可自行定義。
Type: PPPoE Client		Apply	
Max MTU: 1480		Disable	無須修改,默認値設置即可。
Max MRU: 1480		Comment	
		Сору	
Interfaces: adsl	Ŧ	Remove	選取您欲設定之網卡。
		Torch	
		Scan	
disabled running	slave	Status:	

立誠電腦資訊版權所有 翻印必究

lee-cheng.com.tw

New Interface		
General Dial Out Status Traffic Service: AC Name:	OK Cancel Apply	
User: test1234@hinet.net Password: ******* Profile: default Dial On Demand Add Default Route Use Peer DNS - Allow Pap Chap mschap1 mschap2	Disable Comment Copy Remove Torch Scan	輸入 ISP 配發的帳號及密碼。 取消 Add Default Route,才不會自動導向路由器。 使用路由器默認 DNS 給 ppp 的 DNS。
disabled running slave State	15:	



# 設定橋接:Bridge

📃 Bridge									×
Bridge Por	rts Filters	NAT Host	s						
+ -	Ø 🐹	27	Settings						Find
Name		/ Туре		Tx	Rx	Tx Pac	Rx Pac	Tx Drops	Rx Drop 🔻
4									•
0 items out of	f 4								

(因為 PC 的 IP Address 跟廣域網路 IP 資訊「61.65.72.0-61.65.72.127」,同一個區段,故做橋接)

🔜 Bridge			$\mathbf{X}$
Bridge Ports Filte	rs NAT Hosts		Find
Name	/ Туре	Tx Rx Tx Pac	Rx Pac Tx Drops Rx Drop 🔻
1 item out of 5 (1 sele	General STP Status General STP Status Name: Type: MTU: MAC Address: ARP: Admin. MAC Address:	Traffic wan_b Bridge 1500 enabled Tuming	○K       此名稱可自行定義。         Cancel       山北名稱可自行定義。         Apply       Disable         Comment       以默認值設定即可。         Copy       Image: Comment of the second seco

🔲 Bridge					X
Bridge Ports Filters NAT Hosts					Find
Name / Type R 4=1:wan_b Bridge	Tx O bps	Rx O bps	Tx Pac O	Rx Pac O	Tx Drops Rx Drop 🔻 0 0
■ Bridge Set ✓ Use IP Firew □ Use IP Firew □ Use IP Firew	tings vall vall For VLAN vall For PPPoE	OK Cancel Apply		橋接模式 勾選「U 才能達到	式下設定分流一定 Jse IP Firewall」, 到分流效果。
▲ 1 item out of 5 (1 selected)					Þ

× Bridge Bridge Ports Filters NAT Hosts **a** 7 ÷ - -× Interface Bridge Priority (... Path Cost Horizon Role Root Path .... • 80 44lan wan\_b 10 designated port designated port 44wan 80 10 wan b 📃 Bridge Port <lan> × 🔜 Bridge Port <wan> × General Status General Status OK OK Interface: wan Interface: lan Ŧ Ŧ Cancel Cancel Bridge: wan\_b Bridge: wan\_b Ŧ Ŧ Apply Apply Priority: 80 Priority: 80 hex hex Disable Disable Path Cost: 10 Path Cost: 10 Comment Comment Horizon: -Horizon: ¥ Сору Сору Remove Ŧ Remove Ŧ Edge: auto Edge: auto Point To Point: auto Ŧ Point To Point: auto Ŧ External FDB: auto Ŧ External FDB: auto Ŧ 欲使lan得到wan的IP資訊,所以要將lan跟wan做橋接。

#### Use IP Firewall 設定: Bridge > Settings (勾選 Use IP Firewall)

#### 設定 IP 資訊:IP>Addresses

此範例中,廣域網路 IP 資訊為「61.65.72.0-61.65.72.127」。(因為已將 lan 跟 wan 做橋接, Public IP 可設在 lan 或 wan)

	Fin		T	3 6	- //
Address / Network Broadcast Int	erface	Broadcast	Network	- A	Address

#### 設定一組 IP 給 wan 網卡。(61.65.72.126/25)



	Address List				×
+	- 🗸 🗶 d	7			Find
	Address	Network	Broadca	ast	Interface 🗾 💌
D	骨61.65.72.126/25	61.65.72.0	61.65.7	2.127	wan
D	₽218.102.124.70	218.162.120.254			pppoe-outi
	🗖 Addı	ess <61.65.72.1	26/25>	-	
	Addres	s: 61.65.72.126/25		OK	
	Network	c: 61.65.72.0	•	Cance	1
	Broadcas	t: 61.65.72.127	<b></b>	Apply	У
	Interfac	e: wan	<b>•</b>	Disabl	le
				Comme	ent
				Сору	r
2 iten	ns (1 selec			Remov	ve
	disabled				

## 設定預設閘道:IP > Routes

此範例中,廣域網路預設閘道為「61.65.72.125」; ADSL 預設閘道為「218.162.120.254」。

🔜 Route List								×
Routes Rules								
+ - 🖉 🗶 🖾	T				Find		all	₹
Destination 🛛 🗵	Gateway	Gateway I	Interface	Distance	Routing Mark	Pref.	Source	-
DAC 61.65.72.0/25			wan_b	0		61.65	5.72.12	6
DAC >218.162.120.254			pppoe-out1	0		218.1	62.131	1.66
								F
2 items								

新增廣域網路預設閘道「61.65.72.125」。(61.65.72.125 為靜態路由)

Cateway 2.0/25 2.120.254	Gateway I Interface wan_b pppoe-out1	Distance 0 0	Find Routing Mark	all <b>F</b> Pref. <b>F</b> 61.65.7: 218.162	
/ Gateway 2.0/25 2.120.254	Gateway I Interface wan_b pppoe-out1	Distance 0 0	Routing Mark	Pref. <b>•</b> 61.65.7. 218.162	
📃 New Route					
General Attributes Destination: 0.0.0.0/ Gateway: 61.65.72 Gateway Interface: Comment for New master	Route	OK Cance Appl: Disab Comm Remov	ent	專線預設問 (以 master	罰道的備註 爲備註名 <sup>;</sup>
Scope: 30 Target Scope: 10 Routing Mark: Pref. Source:					
and a second sec	Scope: 30 Target Scope: 10 Routing Mark: Pref. Source: disabled	Comment for New Route         master       OK         Cancel         Scope:       30         Target Scope:       10         Routing Mark:       •         Pref. Source:       •         disabled       active	Comment for New Route         master       OK         Copy         Cancel         Scope:       30         Target Scope:       10         Routing Mark:       •         Pref. Source:       •         disabled       active	Comment for New Route   master   OK   Copy   Remove     Scope:   30   Target Scope:   10   Routing Mark:   Pref. Source:     v	Comment for New Route   master   OK   Copy   Copy   Remove     Scope:   30   Target Scope:   10   Routing Mark:   Pref. Source:     Image: Scope:     Image: Scope: Scope:     Image: Scope: Scope

新增 ADSL 預設閘道為「218.162.120.254」。(218.162.120.254 為策略路由)

🔜 Route List					×	
Routes Rules				Find	əll 🔻	
Destination 🕢 Gateway	/ Gat	teway I Interface	Distance	Routing Marl	k Pref. 🔻	
;;; master     AS	2.125	wan_b wan_b pppoe-out1	1 0 0		61.65.7. 218.162	
🛄 New Route				×		
General Attributes			OK			
Destination:	0.0.0.0/0		Cance	1		
Gateway:	218.162.120.254	•	Apply	,		
Gateway Interface:		\$	Disabl	e		
Comment	for New Route	×	Comme	ent >	ADSL 預調	設開
3 items		OK OK	Сору	<u> </u>	(L) slave	爲僱
		Cancel	Remov	/e		
Scope:	30		Γ			
Target Scope:	10					
Routing Mark:	AD	<b>T</b>				
Pref. Source:		•				
disabled		active	1.			

+		T				Find	all 🔻
	Destination	🛆 Gateway	Gateway I	. Interface	Distance	Routing Mark	Pref
;;; I	naster			201203-012			
AS	▶ 0.0.0.0/0	61.65.72.125		wan_b		1	
,,, S	lave	010 1/0 100 054		200-0100 C1000-04		1 45	
15	P 0.0.0/0	218.162.120.254		pppoe-outi			C1 C5 7
DAC	► 01.00.72.0720			Wan_D		0	01.02.
	Z10.102.120.204			pppoe-ourr		0	210.10
one							
nc	-						
'nC	. • Maadaaaaaa 3						
/nc	•						
JAC .							
JAC							
JAC							
UNC							
Unc							

#### 設定 NAT 轉換: IP>Firewall>NAT

Firewall							×
Filter Rules NAT	Mangle Service Por	ts Connec	ctions Address Lists	Layer7 Protoc	ols		
		Reset Coun	tters 00 Reset All	Counters	Find	all	₹
# Action	Chain Src. A	idress Dst	t. Address Proto S	rc. Port Dst.	Port In. In	te Out. In	t 🔻
items New NAT Ru	le		2	3			
Jeneral Advance	d Extra Action St	atistics	ОК				
Chain:	srenat	₹	Cancel	Ī			
Src. Address:	61.65.72.0/25		Apply	••••••••••••••••••••••••••••••••••••••	內部網路 IP	區段。	
Dst. Address:		•	Disable				
Protocol:		•	Comment	Ĩ			
Src. Port.		•	Сору	Ĩ			
Dst. Port:		~	Remove	Ī			
Any. Port:		-	Reset Counters				
In. Interface:		•	Reset All Counters	選取	欲將數據資	料導出去	的網卡介面
Out. Interface:	pppoe-out1	Ŧ <b>-</b>	-	1 範例	中,將HTT	P和FTP	導入 ADSL
Packet Mark		<b>_</b>		中,	所以在做完	標記(Man	gle)和策略
Connection Mark:		<b>-</b>		(Rout	te),最後要	再做 NAT	轉換,將標
Routing Mark:				的數	據資料導去	pppoe-out	1 網卡介面
Connection Type:		•					



New NAT Rule	10		X				
General Advanced Extra Act	tion Statistics		DK				
Action: masquerade	Ŧ	Ca	incel	- 一個路由策	路自動分 	配的 IP	位址取代
		Aj	pply	IP 的來源位	址。		
		Di	sable				
		Con	ament				
		С	ору				
6		Po					
ADSL線路分流	NAT Rule		ers				
AD SDAKED J DL	9	OK	aters				
		Cance					
disabled							
<b>1</b>				-		1	
Firewall	n in Parts Cauna						<u> </u>
Filler Kules MAT Mangle Se	Price Ports Conne		Deset úll Cou	ayer/ Flotocols	ad la	.11	-
# Action Chain	Src. Address D:	st. Address	Proto Src.	Port Dst. Port	In. Inte	Out. Int	-
;;;ADSL線路備援 0 ≓∥mas_srnat	61 65 72 0/			1		DDDOe-	
;;; ADSL線路分流	61 65 70 0/						
I ∓∥ mas srcnat	01.05.72.07					pppoe	
				× /ت			
	ADSL線路備接	彩NAT規則	建議放在第	511山 ○			
	ADSL線路備接	爱NAT規則	建議放在第	,──1回。			
	ADSL線路備接	爱NAT規則	建議放在第	;1回。			
	ADSL線路備接	愛NAT規則	建議放在第	;──1ഥ。			
	ADSL線路備接	愛NAT規則	建議放在第	;—1道。			

# 設定 Scripts:System>Scripts 撰寫備援腳本

Script List	X
Scripts Jobs	
+ - T Run Script	Find
Name 🖌 Owner Last Time Started	Run Count 🔻
0 items	
Script <up>         Name: up       OK         Owner: admin       Cancel         -Policy       Apply         ✓ reboot       ✓ read         ✓ write       ✓ policy         ✓ test       ✓ password         ✓ sniff       Run Script         Last Time Started:       —</up>	定義線路正常-腳本名稱。
Run Count: 0 Source: /ip firewall nat disable [ /ip firewall nat find comment="ADSL線路備援"]	關閉備援。 (專線線路正常,所以關閉ADSL線路備援)
/ip firewall nat enable [ /ip firewall nat find comment="ADSL線路分流"] in firewall manale enable [ in firewall	開啓分流。
Ap Interval margie enable [ Ap Interval mangle find chain=prerouting] Ap route set [ Ap route find comment=master] seteway=61 65 72 125	開啓HTTP、FTP分流。
	啓動專線線路為主線。 (將gateway更改為專線預設閘道IP-61.65.72.125)

🔜 Script <down></down>	×	
Name: down	ОК	定義線路異常-腳本名稱。
Owner: admin	Cancel	
- Policy	Apply	
🖌 reboot 🖉 read		
🖌 write 🔽 policy	Сору	
✓ test ✓ password	Remove	
✓ sniff	Run Script	
Last Time Started:		
Run Count: 0		開啓備援。
Source:		(專線線路斷線,所以開啓ADSL線路備援)
/ip firewall nat enable [ /ip firewall nat find comment="ADSL線路備援"]		
/ip firewall nat disable [ /ip firewall nat find comment="ADSL線路分流"]		關閉分流。
/ip firewall mangle disable [/ip firewall mangle find chain=prerouting]		關閉HTTP、FTP分流。
/ip route set [/ip route find comment=master] gateway=218.162.120.254		啓動撥接線路爲副線。
		(將gateway更改為ADSL預設閘道IP-218.162.120.254)

設定 Netwatch: Tools > Netwatch (偵測線路狀態)

Netwatch		×
+ - 🖉 🖾 🖓		Find
Host / Interval Timeout (	. Status Sinc	e 🗸
New Netwatch Host	X	
Host Up Down	ОК	以偵測專線線路為主要偵測點。
Host: 61.65.72.125	Cancel	
Interval: 00:00:10	Apply	每10秒值測一次。
Timeout: 998	Disable	
Status:	Comment	值測998毫秒無回應,即判斷Timeout。
Since:	Сору	
	Remove	
disabled		



線路正常, 啓動"up"腳本。 (呼叫 Scripts 裡線路正常的腳本名稱)



測試偵測線路狀態:

(1)把 WAN 網卡上的的網路線線拔掉。(假設線路斷線的情況)

<b>—</b> N	etwatch				×
+	- / / 6	7			Find
	Host 7	Interval	Timeout (	Status	Since
	♠61.65.72.125	00:00:10	998	down	Jun/13/2009 09:50:53
				線路斷線	. 0
1 item	l.				

Rout	es Rules							
+	- / 2 6	7				Find	all	Ŧ
	Destination	Gateway	Gateway I Interfa	ce	Distance	Routing Mark	Pref.	•
,,,,	master	51	- 10 51 - 10.			Mi 20		
AS	0.0.0.0/0	218.162.120.254	pppoe-	out1	1			
	slave							
AS	0.0.0.0/0	218.162.120.254	pppoe-	out1	1	AD		
DAC	▶ 61.65.72.0/25		wan_b		0	1	61.65	5.7
DAC	>218.162.120.254	V	pppoe-	out1	(	1	218.	162

Firewa	ա										×
Filter Rule	s NAT	Mangle Ser	vice Ports Co	nnections	Add	lress Lis	ts Layer7	Protocols			
+ -	1	07	😂 Reset C	Counters	00	Reset A	ll Counters	Fi	nd	all	₹
#	Action	Chain	Src. Address	Dst. Addr	ess	Proto	Src. Port	Dst. Port	In. Inte	Out. Int.	
0 ;;;; 等向 1 X	<b>≓∥ mas</b> 分流 ≓∥ mas 斷,	srcnat srcnat 線時,啓動	備援。							pppoe	

			E Reset C	Counters 00	Reset All Counter	s Find	all	
#	Action	Chain	Src. Address	Dst. Address	Proto Src. Port	Dst. Port	In. Inte	Out. Int.
;;;; HTTI	2				an a	10. 12.02	1965 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 19	de de la composición
0 X	🖋 mar	prerouting			6 (tcp)	80	wan_b	
1 X	🥒 mar	prerouting					wan_b	
2 X	🖋 mar	prerouting						
;;; FTP								
3 X	🖋 mar	prerouting			6 (tcp)	20-21	wan_b	
4 X	/ mar	prerouting					wan_b	
5 X	/ mar	prerouting					1000	
6 D	🖌 cha	forward			б (tcp)		pppoe	
7 D	🖌 cha	forward			6 (tcp)			рррое
		Ĩ		<sub>と定</sub> ,如果單	純只做備援的話	舌,這些不用	設定	
### (2)把 WAN 網卡上的網線線接上。(假設線路正常的情況)







立誠電腦資訊版權所有 翻印必究

			a Reset (	Counters (	00 Reset All Counte	rs Find	all	Ŧ
#	Action	Chain	Src. Address	Dst Addres	s Proto Src Por	Dst. Port	In Inte	Out Int 🔻
;;;HTT	P							
0	🥒 mar	prerouting			6 (tcp)	80	wan_b	4
1	🥒 mar	prerouting					wan_b	5
2	🥒 mar	prerouting						21
;;; FTP								14.38
3	🥒 mar	prerouting			6 (tcp)	20-21	wan_b	
4	🥒 mar	prerouting					wan_b	
5	/ mer	prerouting					07988	
6 D	🖌 cha	forward		$\wedge$	6 (tcp)		DDDOG-	
7 D	🗸 cha	forward			6 (tcp)			

### 四、頻寬管理 QOS

### (a) IP 頻寬限制

IP 頻寬限制: Queues > Simple Queues (如在橋接模式下需將 Bridge > Settings 勾選 Use IP Firewall \_)

mple Q	ueues	Interface	Queues	Queue	Tree	Queue T	ypes	
-		8	3 7	1	Reset C	Counters	00 Reset All Counters	Find
	Nam	e	Target A	.ddress	Rx Ma	ax Limit I	x Max Limit Packet	

# 新增單一 IP 限速規則: 🕈

🔝 New Simple	Queue	×	
General Advan Name: Target Address:	ced Statistics Traffic Total Total Statistics PC1 192.168.88.220  ✓ Target Upload ✓ Target Download	OK Cancel Apply Disable	名稱:自行定義 目標位址:輸入要限制頻寬之 IP Max-Limit:選取想限制之速率
Max Limit: -▼- Burst -▼- Time	512k <b>T</b> 1M <b>T</b> bits/s	Comment Copy Remove Reset Counters Reset All Counters	

## 撰寫限速腳本:System > Scripts

Second and a second		
un Script		Find
Owner	Last Time Started	Run Count
	Owner	Owner Last Time Started

E Script <queue-limit></queue-limit>		<b></b>	
Name: IP 限速		OK	腳本名稱,可自行定義。
Owner: admin - Policy V reboot V write V test M sniff	<ul> <li>✓ read</li> <li>✓ policy</li> <li>✓ password</li> </ul>	Cancel Apply Copy Remove	
Last Time Started: Run Count: 0 Source: :for saa from 1 to 10 do={ /queue target-address=("192.168.88.".\$a	e simple add name=("PC".\$aaa) aa) max-limit=512000/1000000}	Run Script	執行腳本。(第一次新增需先按 「Apply」才能成功執行腳本)
	aaa_定義爲變數。 from 1 to 10定義爲從1開始 "PC".\$aaa 代表 PC 爲固定文 "192.168.88.".\$aaa 同上。 max-limit=512000/1000000;	到10。 :字需加雙引號, 可自行定義速率	\$aaa 是呼叫 aaa 變數。 。



#### (b)封包頻寬限制

IP 頻寬限制:Queues > Queue Tree (如在橋接模式下需將 Bridge > Settings「勾選 Use IP Firewall」)

		and the second se					U	Code-
ple Queues	Interface Queu	es Queue Tree	Queue Types					
	× 7 :	🚝 Reset Counter	rs <b>oo</b> Reset	All Counters			Find	
Name	/ Parent	Packet M	ark Limit A	t ( May Limi	Ave R	Queued Bytes	Bytes	1.
Name	/ Parent	Packet M	ark Limit A	t ( May Limi	Ave R	Queued Bytes	Bytes	



🗾 Queue List									×
Simple Queues	Interface	e Queues	Queue Tree	Queue Types					
+ - <	8	7 🚝	Reset Counter	rs <b>00</b> Reset A	ll Counters			Find	
Name	/ Pa	rent	Packet Mark	Limit At (	Max Limi	Avg. Rate	Queued Bytes	Bytes	-
<b>⊞</b> HTTP	glo	obal-out	http_packet			117.6 kbps	0 E	186.9	
			設	定完度	戓。				