

台北縣 NGN教育訓練

D-Link Taiwan

DTSS

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Agenda

› Day1

- › 北縣NGN專案整體架構概述
- › 學校端核心交換器(DGS-3627)與網管型POE交換器(DGS-3100)基礎操作及簡易故障排除
- › 無線網路接取基地台(DAP-2590)與無線網路使用者認證伺服器(DSA-3600)基礎操作及簡易故障排除
- › 無線網路使用者認證機制使用教學

› Day2

- › 校園網路管理平台【D-Link D-View 6.0】建置教學及運用
- › 教室網路語音系統設備網路電話（IP Phone）【D-Link DPH-150SE】操作教學及簡易故障排除
- › 教室網路語音系統設備未來性及規劃應用
- › 北縣NGN專案維運平台及Call修流程

Day1

日期	星期	廠牌	講師	上課內容	上課時間
課程第一天					
		D-Link	Johnny Chiang 江國豪	北縣NGN專案整體架構概述	9:00-9:30
		D-Link	Johnny Chiang 江國豪	學校端核心交換器 (L3 switch) 【D-Link DGS-3627】 & 有網管及可擴充功能之超高速乙太網路供電交換器連接埠 (L2 switch POE) 【D-Link DGS-3100-24P & DGS-3100-48P】 基礎操作及簡易故障排除	9:30-11:30
		D-Link	Johnny Chiang 江國豪	Q & A	11:30-12:00
		D-Link	Kyle Chuang 鍾天偉	無線網路接取基地台 (wireless AP) 【D-Link DAP-2590】 & 無線網路使用者認證伺服器 【D-Link DSAP-3600】 基礎操作及簡易故障排除	13:20-14:30
		D-Link	Kyle Chuang 鍾天偉	無線網路使用者認證機制使用教學	14:30-15:30
		D-Link	Kyle Chuang 鍾天偉	Q & A	15:30-16:00

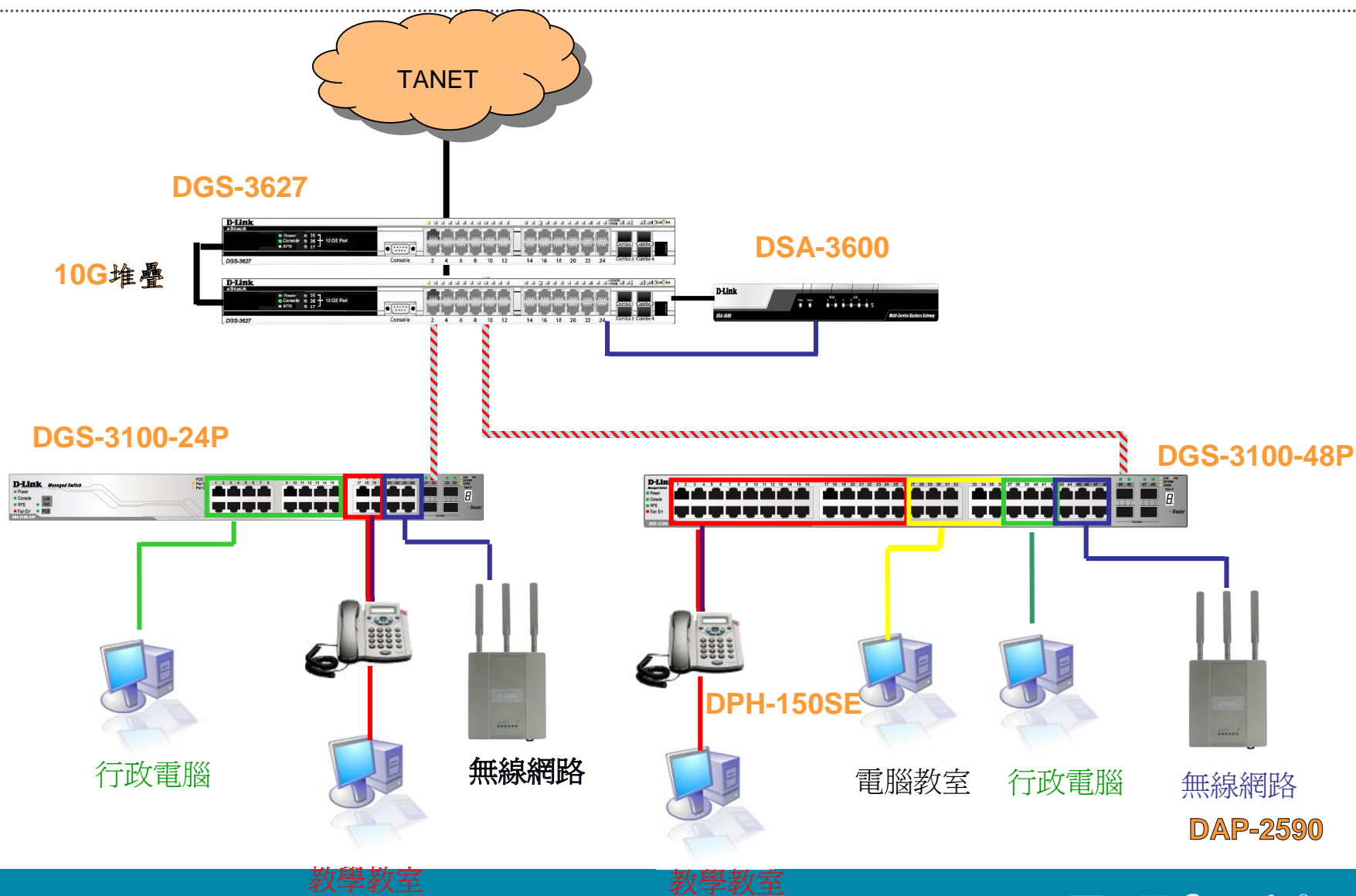
Day2

課程第二天

課程第二天				
	D-Link	Shihhung Yang 楊世鴻	校園網路管理平台【D-Link D-View 6.0】建置教學及運用	9:00-11:30
	D-Link	Shihhung Yang 楊世鴻	Q & A	11:30-12:00
	D-Link	Cluster Hsieh 謝元博	教室網路語音系統設備網路電話 (IP Phone) 【D-Link DPH-150SE】操作教學及簡易故障排除	13:20-14:00
	D-Link	Cluster Hsieh 謝元博	Q & A	14:00-14:20
	D-Link	D-Link	教室網路語音系統設備未來性及規劃應用	14:20-15:20
	大同/D-Link	大同/D-Link	北縣 NGN 專案維運平台及 Call 修流程	15:20-16:00

學校架構示意圖

未來學校網路架構



IP網段說明

未來IP網段配置

Vlan	VID	網段	用途
Mgt	1	10.226.76.254	網管用
Wan	2	163.20.203.89/29	對外連結網段
Lan	3	163.20.172.254/24	行政用
dsa_wan	8	10.253.76.254/24	DSA-WAN IP (10.253.76.1)
Intra-1	10	10.231.76.254/24	電腦教室
Intra-2	20	10.241.76.254/24	教學教室
Voice	25	10.243.76.0/24	VoIP
Wlan	30	10.251.76.254/24	無線網路 (IP移至DSA-3600使用)
WPA2	35	10.245.76.0/24	無線WAP2用
MAC	36	10.247.76.0/24	無線Mobile用

各校DGS-3100 IP配置

› 10.226.x.101-110

or

› 10.227.x.101-110

各校DAP-2590 IP配置

› 10.226.x.201-205

or

› 10.227.x.201-205

各校 DSA-3600 IP 配置

› WAN IP 10.254.x.1

or

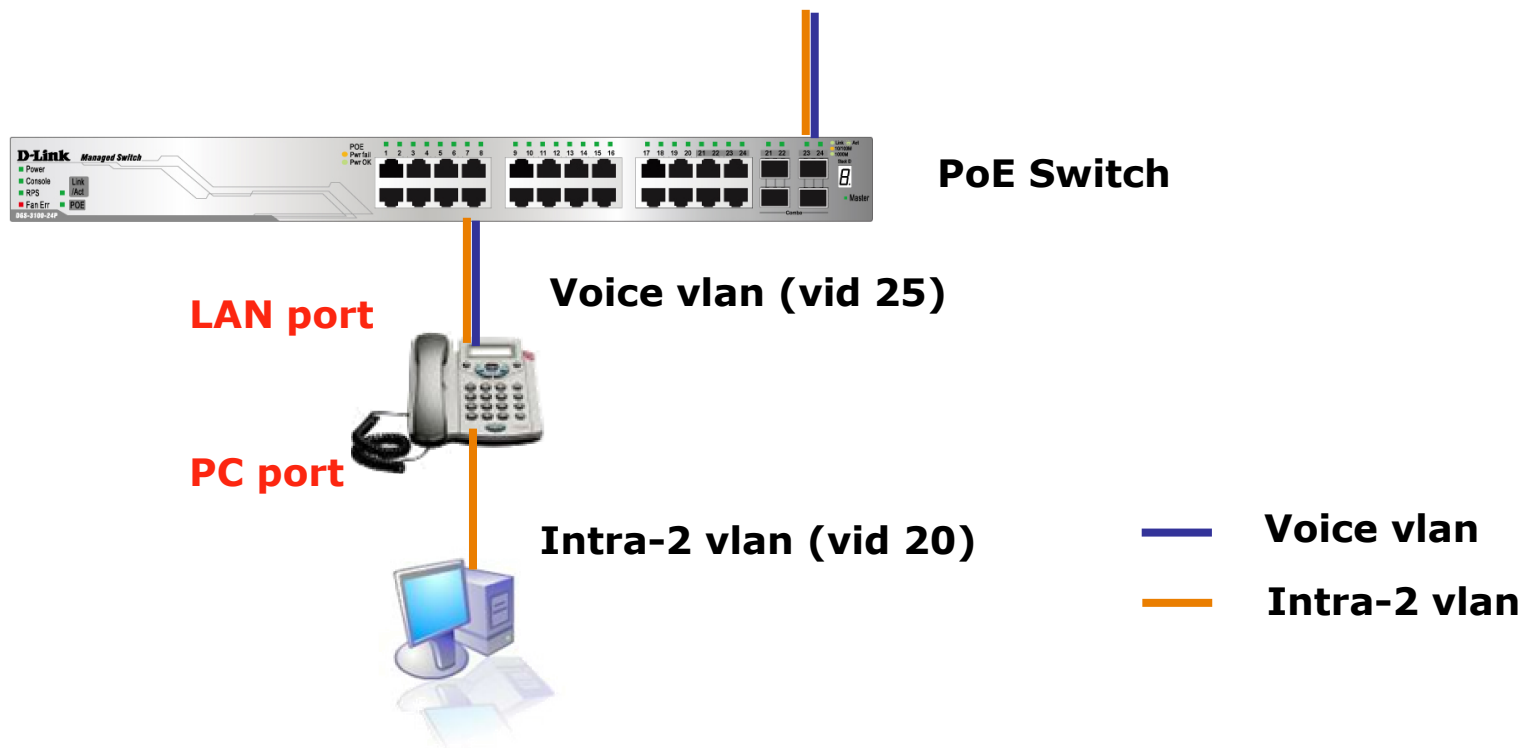
› WAN IP 10.253.x.1

› LAN IP 10.252.x.254

or

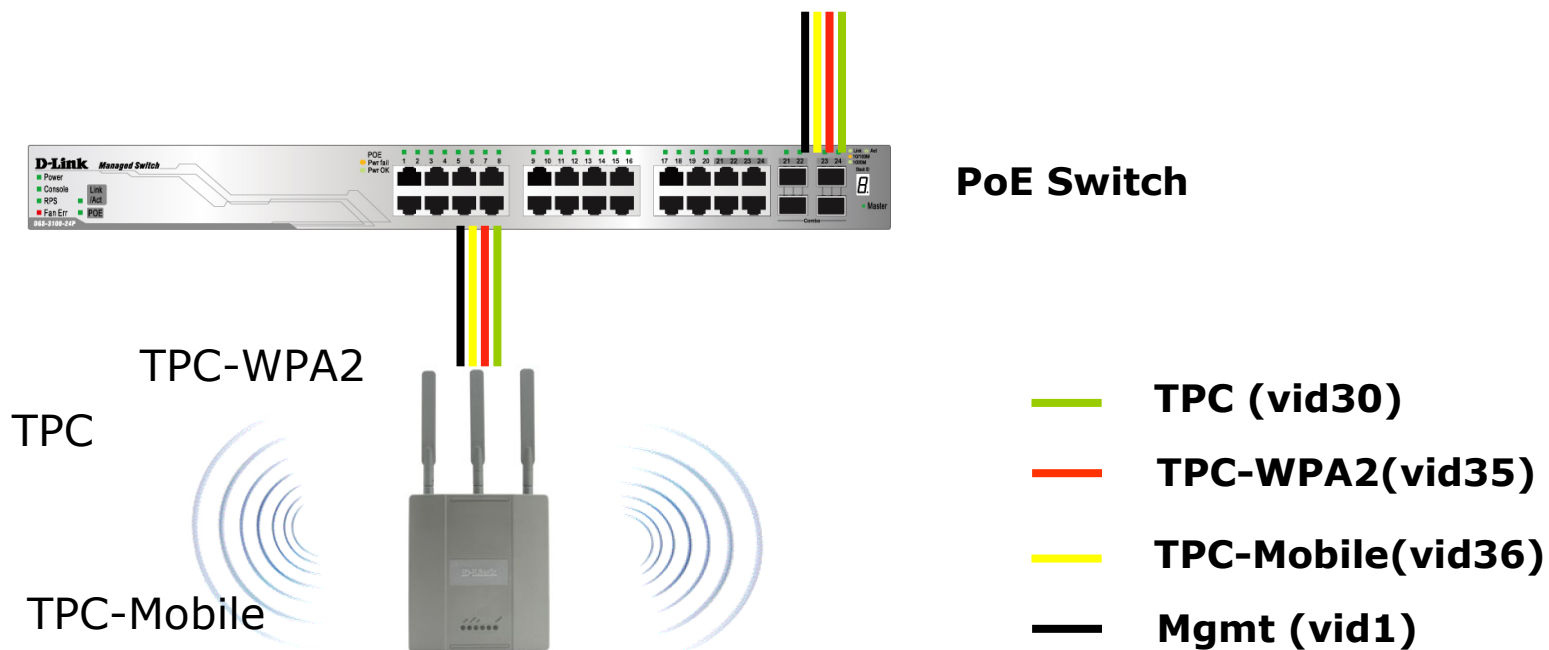
LAN IP 10.251.x.254

架構應用說明—話機



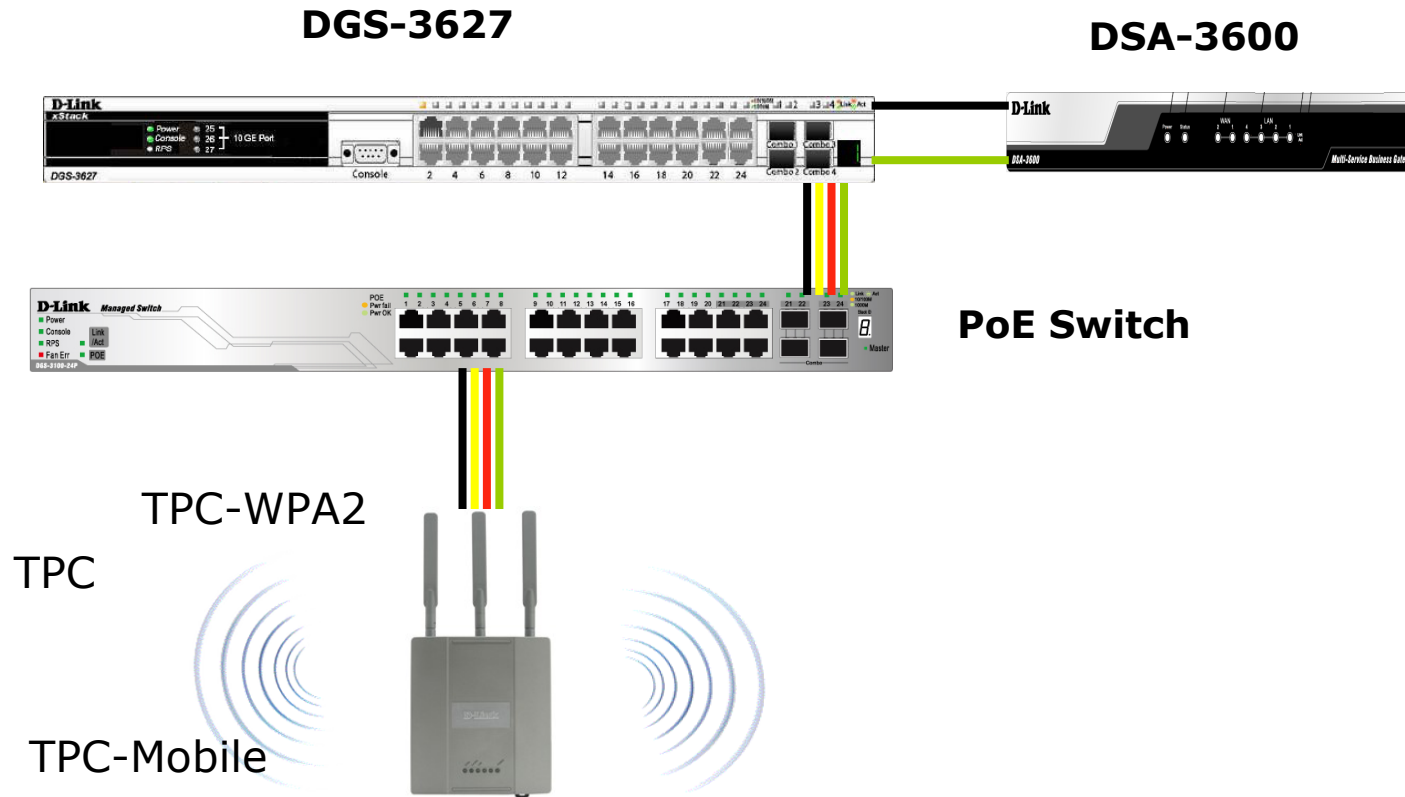
DPH-150SE LAN port負責傳送兩個vlan的流量至PoE Switch
DPH-150SE PC port接收PC

架構應用說明—無線AP



每台DAP-2590提供三組SSID,
TPC提供web認證功能
TPC-WPA2提供WPA2認證功能
TPC-Mobile提供行動裝置MAC認證功能

無線AP認證機制說明



- SSID TPC認證透過DSA-3600與後端系統進行驗證
- SSID TPC-WAP2則透過DAP-2590與後端認證系統進行驗證
- SSID TCP-Mobile則透過DGS-3627與後端系統進行驗證

提供設備項目 - 學校端核心交換器

D-Link DGS-3627 L3交換器

➤ 高擴充性

- 提供3個10G擴充介面、實體堆疊功能
- 可升級IPv6 PIMv6群播路由功能

➤ 承載多元化網路應用

- 提供IPv4/v6群播機制，整合不同網路服務

➤ 安全穩定網路存取

- IPv6 QoS及ACL機制
- 提供802.1x、網頁模式及MAC位址認證
- 提供IPv6 Tunneling功能通過IPv6 Ready Logo Phase-2認證，完全支援IPv6環境
- Endpoint Security安全機制



D-Link 資源說明

資源說明

資源說明

› D-Link Product Search

The screenshot shows the D-Link website's Downloads page for the DES-3828P (Ver.A1) product. The page is viewed in Microsoft Internet Explorer. The browser's address bar shows the URL: <http://tsd.dlink.com.tw/downloadsdetail.asp?AutoRedirect=Yes>. The website header includes the D-Link logo and the tagline "Building Networks for People". A navigation menu contains links for Downloads, GPL Source Code Support, Vista Support, D-Link D-View License Key Request, D-Link Partner, and Contact Us. The main content area is divided into two sections: Technical Support (with a photo of three people) and Downloads. The Downloads section is titled "DES-3828P (Ver.A1)" and contains a table of files.

Type	Version/Date code	Size
Firmware	V3.00B57 / 2007-07-25	4.85 MB
Procedure	V3.30B29 / 2007-05-16	115.86 KB
Management Application	v3.00B29 / 2006-12-26	396.27 KB
Firmware	v3.00B29 / 2006-12-26	10.48 MB
Management Application	v2.00B30 / 2006-04-14	25.61 MB
Manual	v2.00B30 / 2006-04-14	54.47 MB
Firmware	v2.00B30 / 2006-04-14	8.61 MB
Firmware	1.00.B31 / 2005-12-27	4.18 MB
Management Application	v1.00B23 / 2005-08-17	20.01 MB
Manual	First release v1.0 / 2005-08-17	6.54 MB

友

D-Link :: 服務支援 - 企業網路設備服務 :: - Microsoft Internet Explorer 是由 D-Link 提供

檔案(F) 編輯(E) 檢視(V) 我的最愛(A) 工具(T) 說明(H)

← 上一頁 → 搜尋 我的最愛

網址(D) http://www.dlinktv.com.tw/support/SupportService_enterprise.asp

- 服務
- 服務政策
 - ▶ D-Link
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 - ▶ 企業
- 產品維護
 - ▶ 產品
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 - ▶ D-Link
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企業網路產品 2 日換修	
產品類別	產品型號
IPS Firewall	DFL-210, DFL-800, DFL-1600, DFL-2500
UTM Firewall	DFL-160, DFL-260, DFL-860
Smart 10/100	DES-1252, DES-1228P, DES-1228
Smart Gigabit	DGS-1216T, DGS-1224T, DGS-1224TP, DGS-1248T
L2 10/100	DES-3010G, DES-3010F, DES-3028, DES-3028P, DES-3052, DES-3052P, DES-3526, DES-3528, DES-3528P, DES-3550, DES-3552
L2 Giga	DGS-3100-24, DGS-3100-24P, DGS-3100-48, DGS-3100-48P, DGS-3426, DGS-3427, DGS-3450
L3 10/100	DES-3828, DES-3828DC, DES-3828P, DES-3852
L3 Giga	DGS-3612G, DGS-3627, DGS-3627G, DGS-3650
Wireless	DAP-2590

之保

供二日快
修服務。

3分機

系統會以

3. 本公司提供將設備寄到客戶地址進行維修，故障設備寄到本公司則由運送其出客戶自行支付。

服務訊息公布

教育訓練

▶ D-Link 產品教育訓練



DGS-3627 基礎操作及簡易故障排除

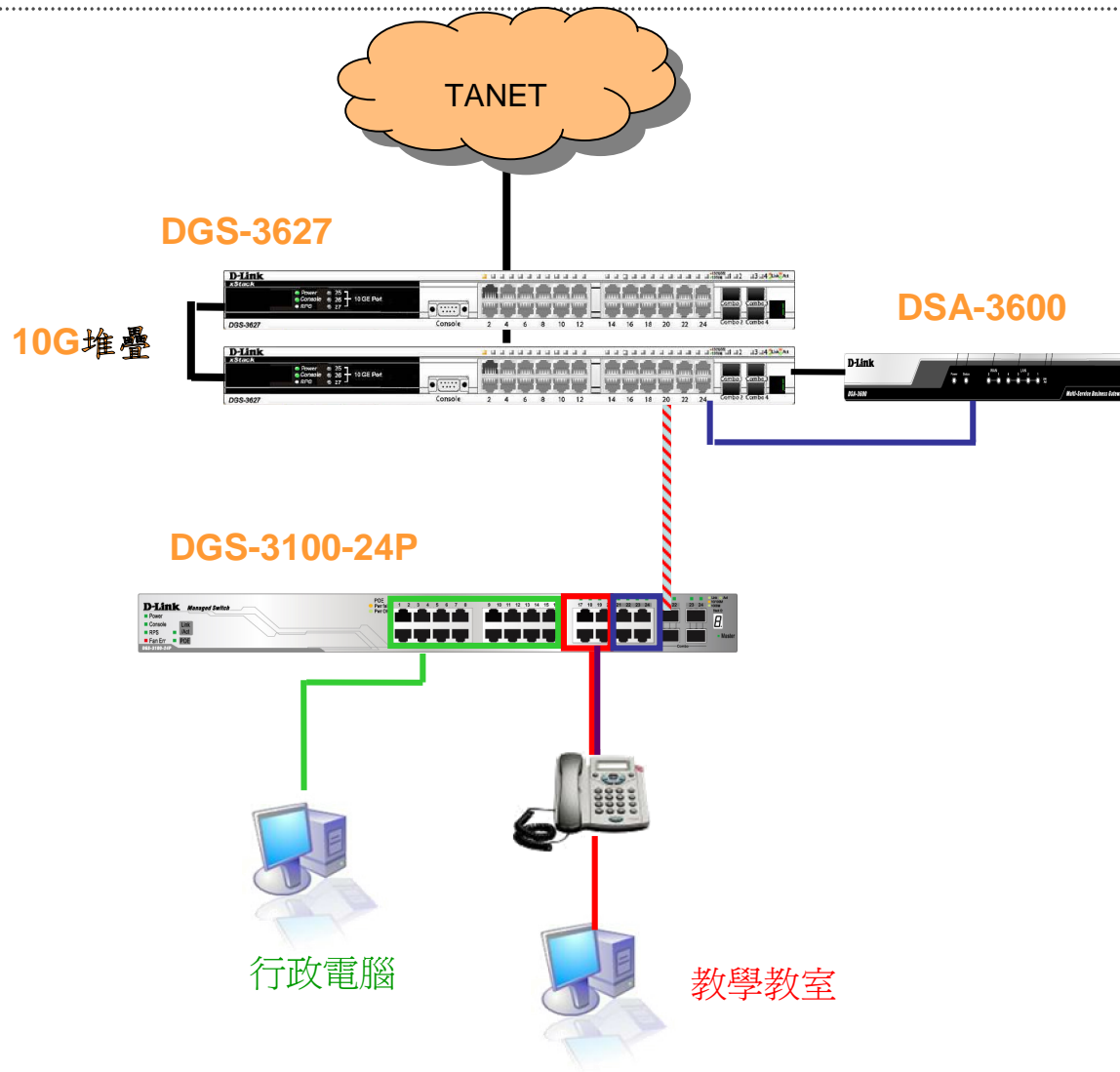
D-Link Switch 基本操作

802.1Q vlan

資源說明

802.1q vlan

未來學校網路架構



IEEE 802.1p/q Frame Tagging

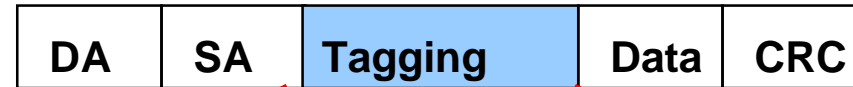
Vlan tag的欄位由32bits組成,其中vid佔有12bits,因此一台交換器vlan最多支援4096

802.1p欄位有3bits,共可區分8種優先權

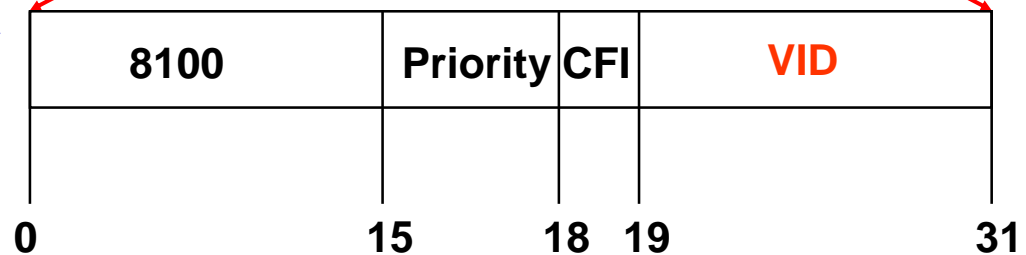
因為4bytes的關係,封包大小變成68-1518bytes



Regular frame (or untagged frame)



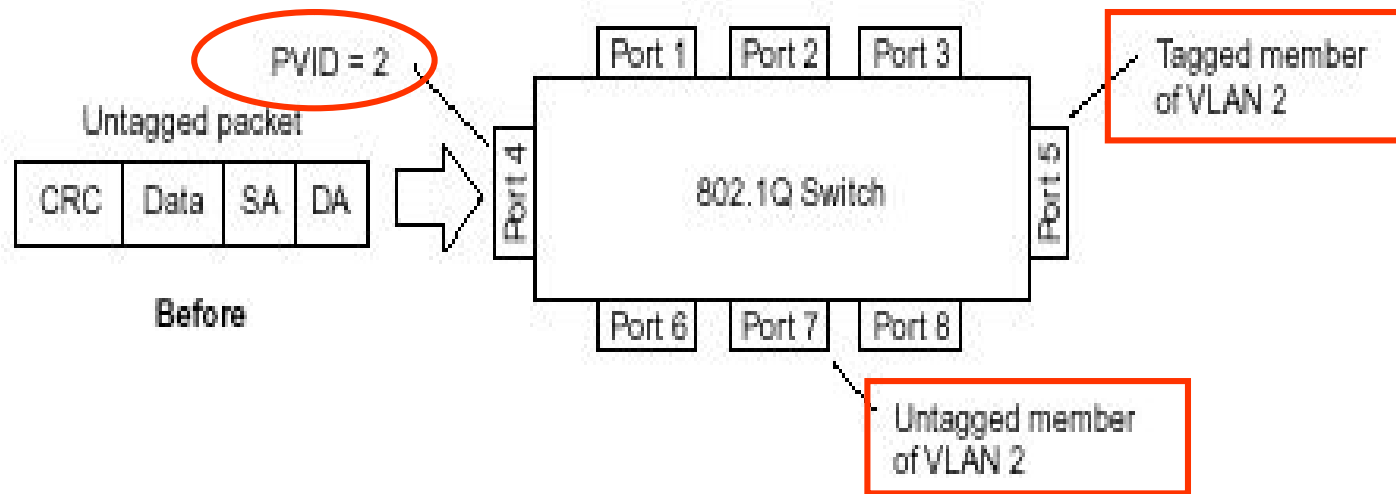
802.1q/1p tagged frame



Priority (1p) has 3 bits, 0-7.

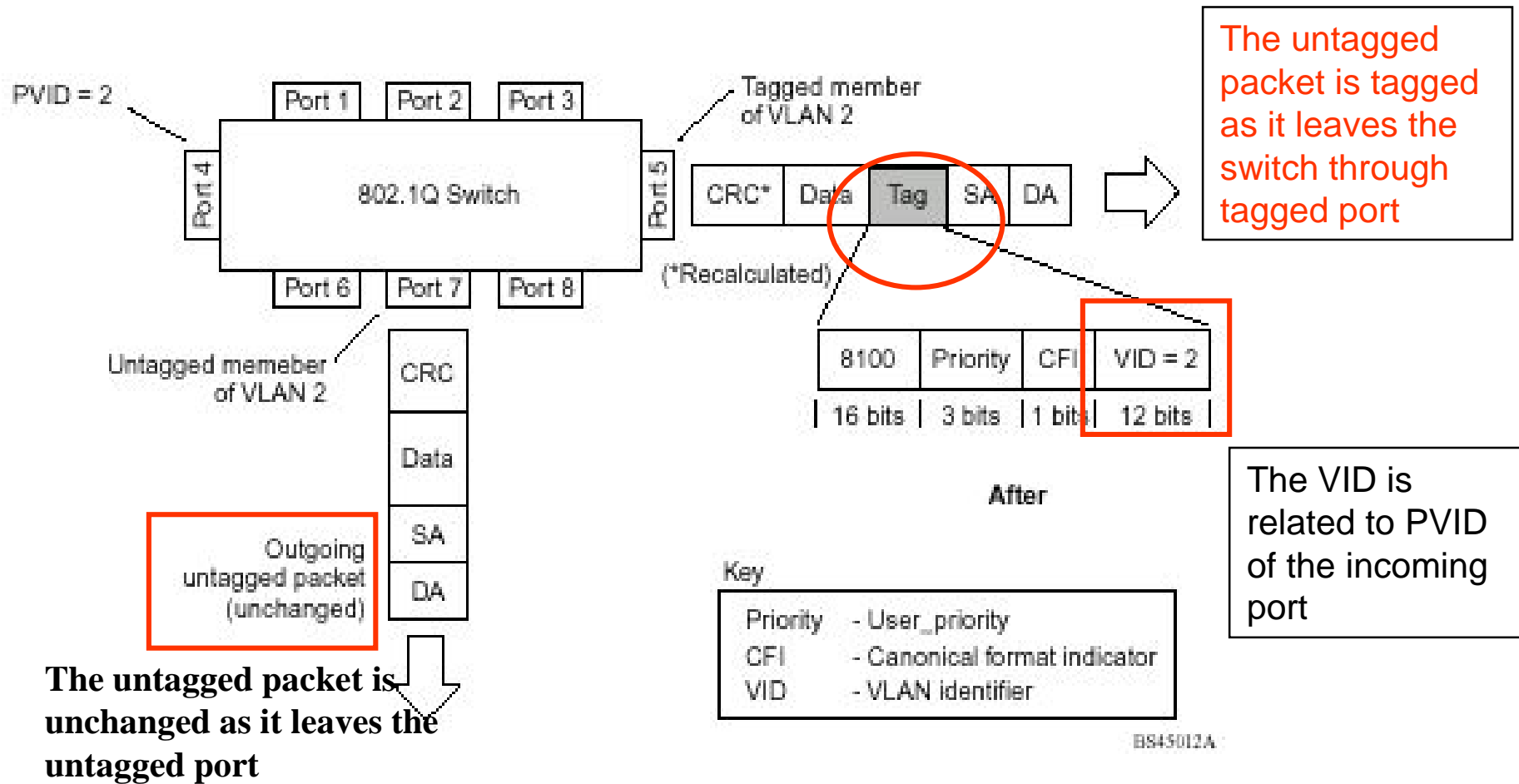
VLAN (1q) has 12 bits, 0-4095

802.1q/p Untagged Incoming Frame

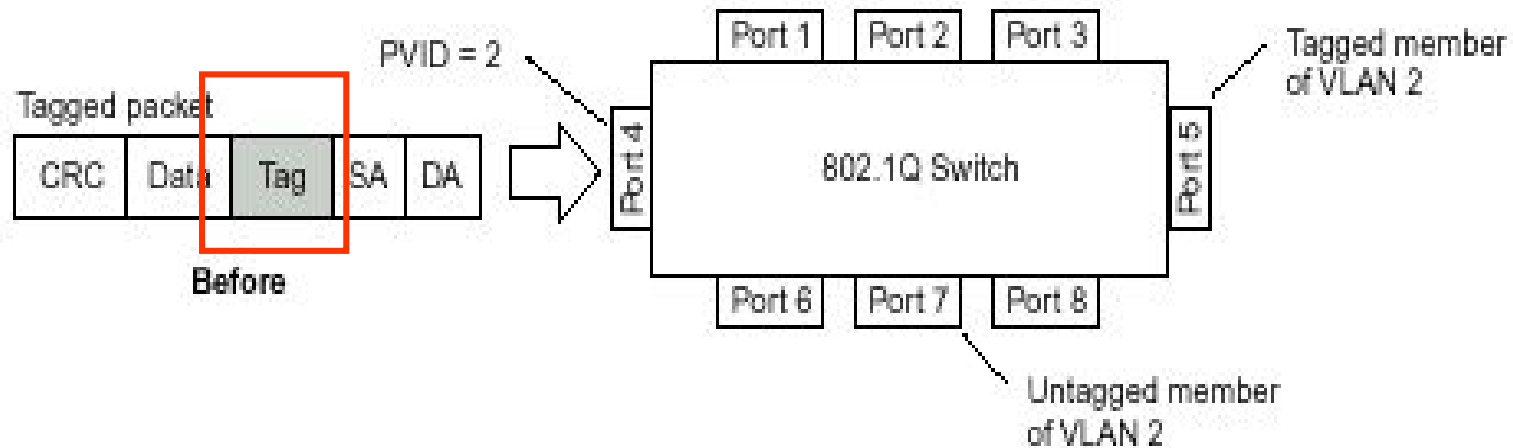


一般封包至Port 4進入後,被歸類為vlan2 (基於PVID=2),如果將由Port 5送出,封包內會帶tag加入802.1q=2,如果將由Port 7送出,封包維持原本的格式,並沒有加入802.1q 資料

802.1q/p Untagged Incoming Frame

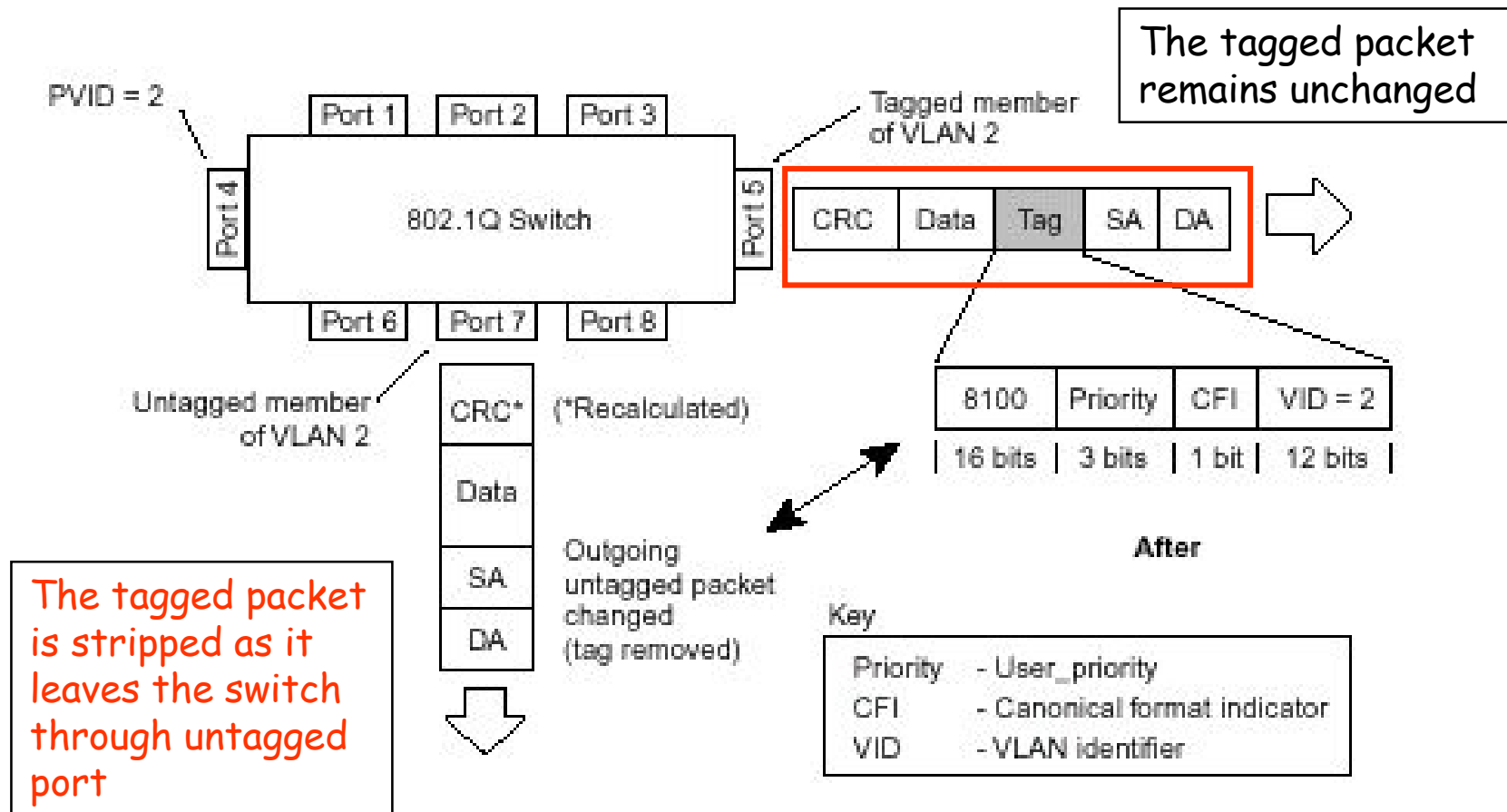


802.1q/p Untagged Incoming Frame



- › 假設封包原本攜帶tag資料,vid=2/802.1p=0自port 4送入,因為本身已經具備vid=2,交換器歸類於vlan2的封包後,若由Port 5送出,則維持原本的封包格式,若由Port 7送出,因為設定為untag,tag欄位的資料將被取下

802.1q/p Untagged Incoming Frame



802.1q/p Tagging Summary

Ingress (incoming frame):

- › 如果收到Untag封包,交換器會使用PVID數值來加入tag資料
- › 如果收到tag封包,那麼vlan id與802.1p維持不變

Inside the Switch (all frames are tagged)

- › 透過VLAN對應出Port後轉送至正確的地方
- › 透過Priority欄位對應至不同的優先權等級處理

Egress (outgoing frame):

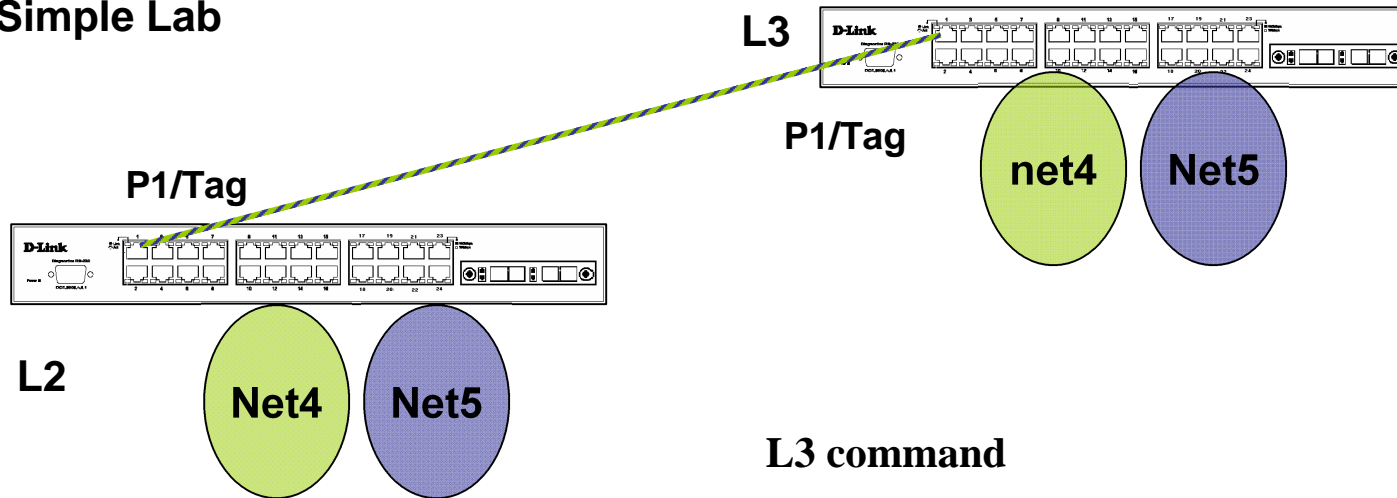
- › Untagged egress port: 移除tag欄位資料
- › Tagged Egress port: 不改變任何tag資料,繼續將原來的資料送至下一個點

Vlan port使用原則

- › Untag Port: 連接終端設備如PC, Server, IPcam等
- › Tag Port: 連接設定完成vlan tag的Switch

802.1Q vlan & L3 LAB

Simple Lab



L2 command

```
config vlan default delete 1-26
create vlan net4 tag 4
create vlan net5 tag 5
config vlan net4 add untagged 2-8
config vlan net5 add untagged 9-16
config vlan net4 add tagged 1
config vlan net5 add tagged 1
save
```

L3 command

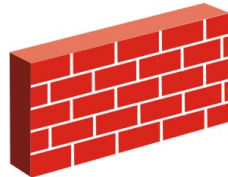
```
config vlan default delete 1-26
create vlan net4 tag 4
create vlan net5 tag 5
config vlan net4 add untagged 2-8
config vlan net5 add untagged 9-16
config vlan net4 add tagged 1
config vlan net5 add tagged 1
create ipif net4 192.168.4.254/24 net4
create ipif net5 192.168.5.254/24 net5
save
```

IP Routing

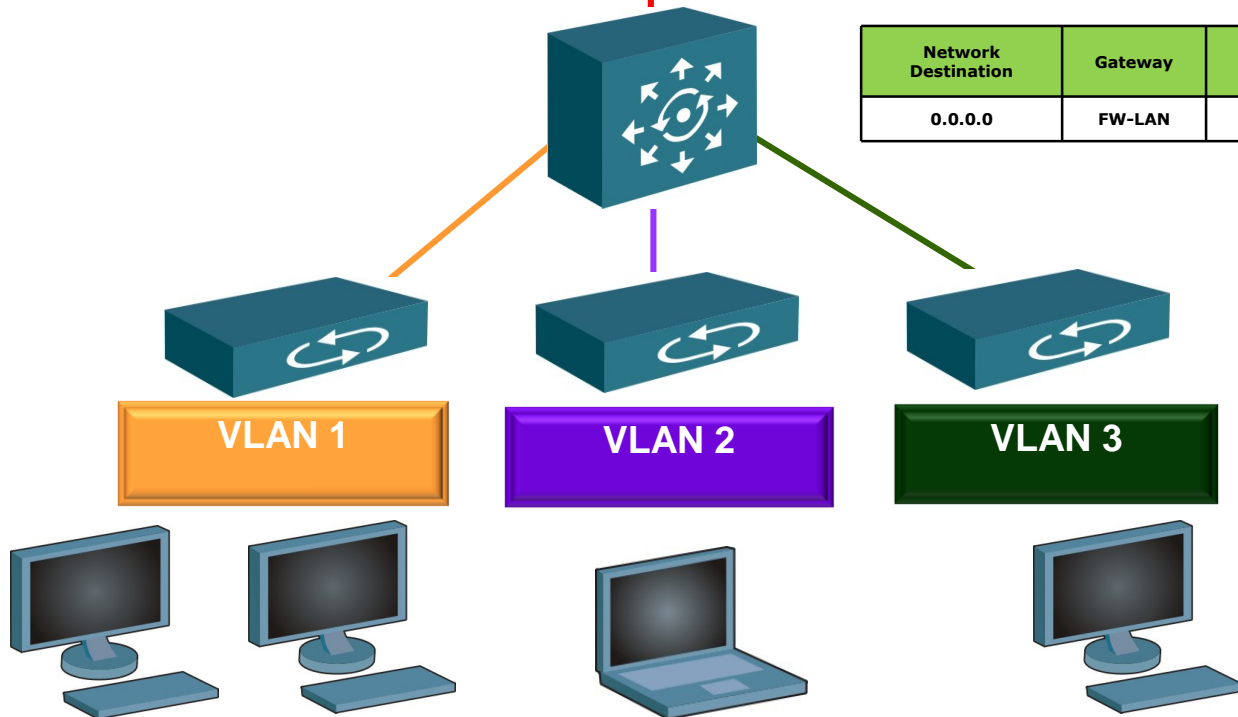
資源說明

IP Routing

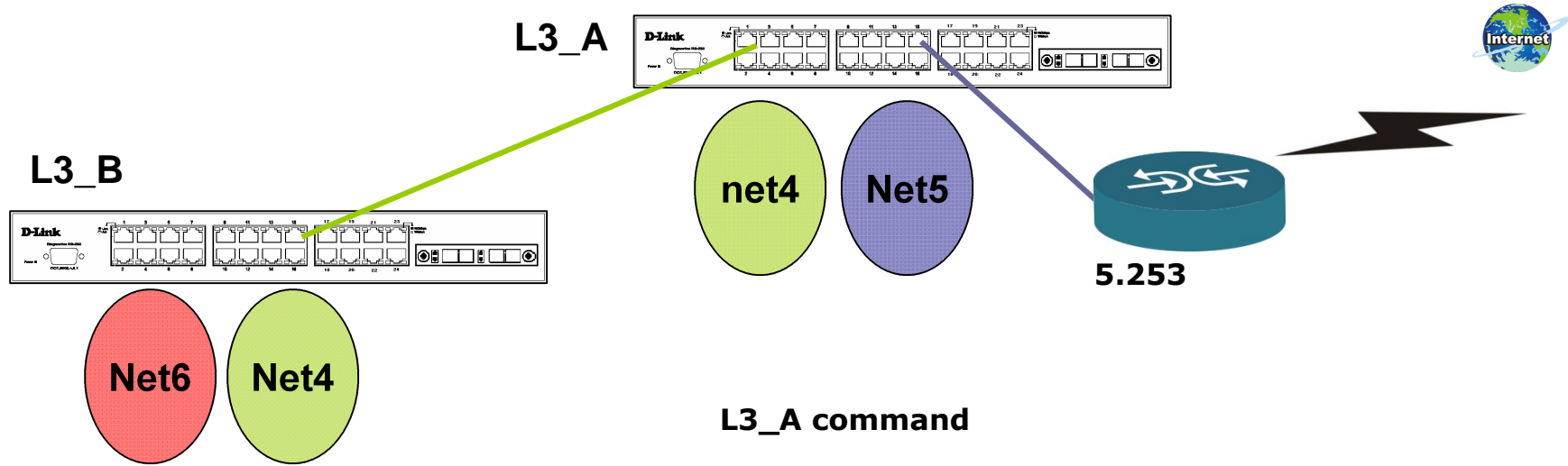
Network Destination	Gateway	Interface	Metric
V1 / 24	V4-Core	FW-LAN	1
V2 / 24	V4-Core	FW-LAN	1
V3 / 24	V4-Core	FW-LAN	1



Network Destination	Gateway	Interface	Metric
0.0.0.0	FW-LAN	V4-Core	1



L3 Routing LAB



L3_B command

```
config vlan default delete 1-26
create vlan net4 tag 4
create vlan net6 tag 6
config vlan net4 add untagged 9-16
config vlan net6 add untagged 1-8
create ipif net4 192.168.4.253/24 net4
create ipif net6 192.168.6.254/24 net6
create iproute default 192.168.4.254 1
save
```

L3_A command

```
config vlan default delete 1-26
create vlan net4 tag 4
create vlan net5 tag 5
config vlan net4 add untagged 1-8
config vlan net5 add untagged 9-16
create ipif net4 192.168.4.254/24 net4
create ipif net5 192.168.5.254/24 net5
create iproute 192.168.6.0/24 192.168.4.253 1
create iproute default 192.168.5.253
save
```

IPv6

v6形式位址表示法

› 32 bits ->128 bits

透過7個冒號將128bits分成8段,每段16bits

› 三種主要表示方式：

FEDC:BA98:7654:3210:FEDC:BA98:7654:3210

1080:0:0:0:8:800:200C:417A

1080::8:800:200C:417A

FF01::101

0:0:0:0:0:0:13.1.68.3

0:0:0:0:0:FFFF:129.144.52.38

IPv6 Auto-configuration

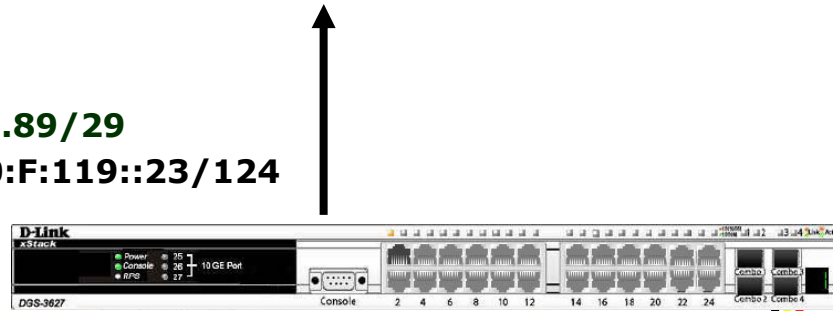
透過具備IPv6功能的交換器啟動IPv6 Auto config功能後,交換器會定時發送IPv6等資訊,安裝IPv6的client取得前半部64bits的資料加上本身的MAC address與相關欄位後建構出完整128bits的IPv6位址

Client端只需要安裝或啟動IPv6協定即可

IPv6 Dualstack topology

163.20.203.89/29

2001:288:0:F:119::23/124



10.231.76.254/24

2001:288:224E:10:FF



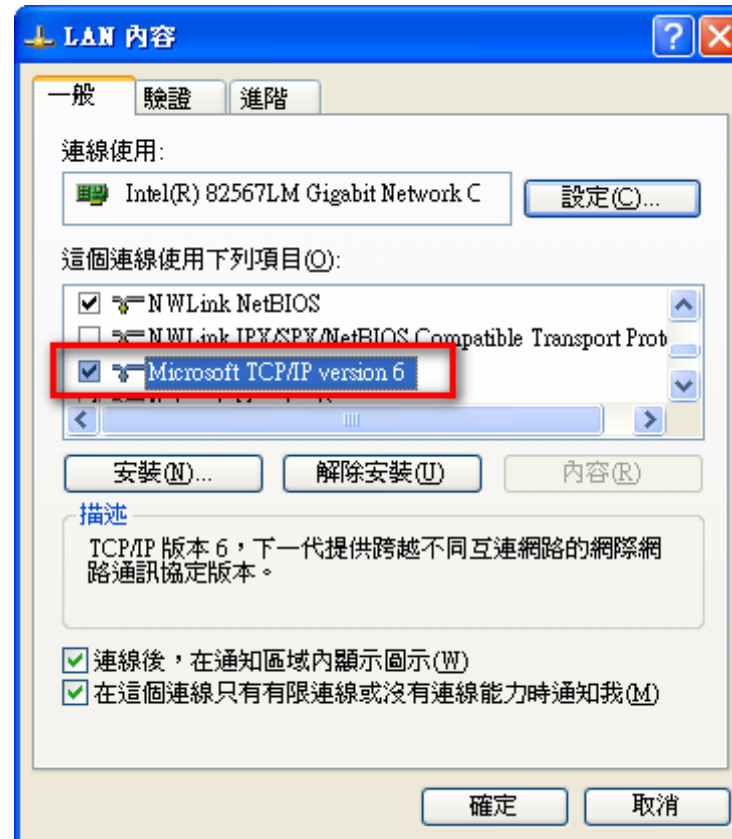
10.231.76.1

2001:288:224E:xx:xx:xx:xx

Client DHCP取得IPv4 IP/Mask/GW/DNS

Client auto config取得IPv6 IP/GW

Client安裝IPv6



Client IPv6 address

```
C:\ 命令提示字元

Media State . . . . . : Media disconnected
Description . . . . . : Bluetooth Personal Area Network
Physical Address . . . . . : 00-1E-37-ED-36-5A

Ethernet adapter LAN:

Connection-specific DNS Suffix . :
Description . . . . . : Broadcom NetXtreme 57xx Gigabit Cont
roller
Physical Address . . . . . : 00-1C-23-54-C6-D4
Dhcp Enabled. . . . . : No
IP Address. . . . . : 192.168.0.33
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 2001:aaaa:1:1:8cd6:8b91:9333:b0d
IP Address. . . . . : 2001:aaaa:1:1:21c:23ff:fe54:c6d4
IP Address. . . . . : fe80::21c:23ff:fe54:c6d4%11
Default Gateway . . . . . : fe80::219:5bff:fe54:d81%11
DNS Servers . . . . . : fec0:0:0:ffff::1%4
                       fec0:0:0:ffff::2%4
                       fec0:0:0:ffff::3%4

Tunnel adapter Teredo Tunneling Pseudo-Interface:

Connection-specific DNS Suffix . :
Description . . . . . : Teredo Tunneling Pseudo-Interface
Physical Address . . . . . : FF-FF-FF-FF-FF-FF-FF-FF
Dhcp Enabled. . . . . : No
IP Address. . . . . : fe80::ffff:ffff:ffff:7%7

新注半 :
```

設備管理資訊

The screenshot displays the D-Link Web Management Tool interface for a DGS-3627 switch. The top section features a hardware status bar with indicators for Power, Console, and RPS, along with a 10 GE Port section and a refresh interval set to 30 seconds. The main content area is divided into two sections: IP Address and IPv6 Address Settings. The IP Address section includes fields for Get IP From (Manual), IP Address (10.227.29.254), Subnet Mask (255.255.255.0), Default Gateway (163.20.209.182), and VLAN Name (default). The IPv6 Address Settings section includes fields for Link-Local Address and Global Unicast Address. A navigation menu on the left lists various management functions such as Administration, L2 Features, L3 Features, QoS, ACL, Security, Monitoring, Reset, Reboot System, Save Services, and Logout.

D-Link
xStack
Power 25
Console 26
RPS 27
10 GE Port
DGS-3627
Console 2 4 6 8 10 12 14 16 18 20 22 24 Combo 2 Combo 4

Refresh Interval: 30 secs Apply

IP Address

Get IP From	Manual
IP Address	10.227.29.254
Subnet Mask	255.255.255.0
Default Gateway	163.20.209.182
VLAN Name	<input type="checkbox"/> default

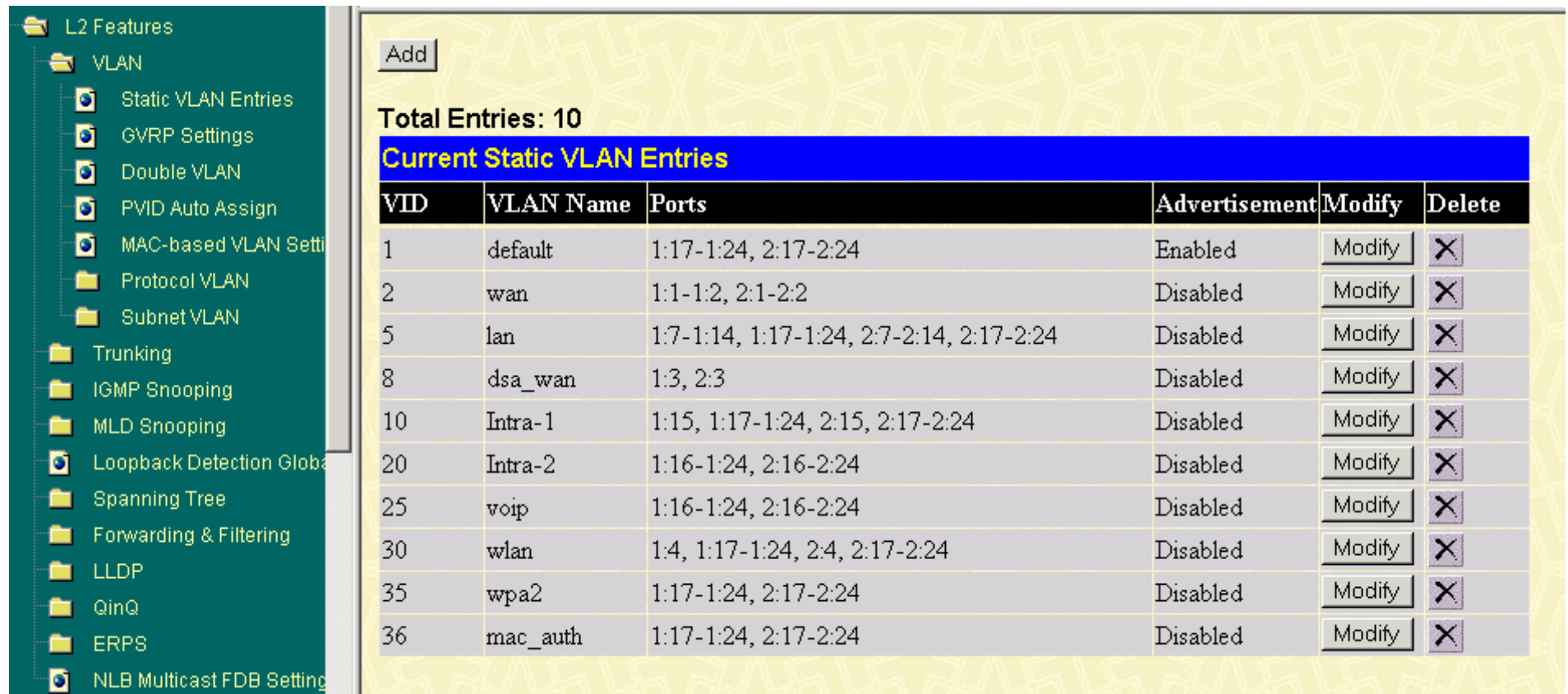
Apply

IPv6 Address Settings

Link-Local Address	
Global Unicast Address	

Administration
L2 Features
L3 Features
QoS
ACL
Security
Monitoring
Reset
Reboot System
Save Services
Logout

Vlan 資訊



Add

Total Entries: 10

Current Static VLAN Entries

VID	VLAN Name	Ports	Advertisement	Modify	Delete
1	default	1:17-1:24, 2:17-2:24	Enabled	Modify	✕
2	wan	1:1-1:2, 2:1-2:2	Disabled	Modify	✕
5	lan	1:7-1:14, 1:17-1:24, 2:7-2:14, 2:17-2:24	Disabled	Modify	✕
8	dsa_wan	1:3, 2:3	Disabled	Modify	✕
10	Intra-1	1:15, 1:17-1:24, 2:15, 2:17-2:24	Disabled	Modify	✕
20	Intra-2	1:16-1:24, 2:16-2:24	Disabled	Modify	✕
25	voip	1:16-1:24, 2:16-2:24	Disabled	Modify	✕
30	wlan	1:4, 1:17-1:24, 2:4, 2:17-2:24	Disabled	Modify	✕
35	wpa2	1:17-1:24, 2:17-2:24	Disabled	Modify	✕
36	mac_auth	1:17-1:24, 2:17-2:24	Disabled	Modify	✕

Port VID 資訊

The screenshot displays a network configuration interface. On the left is a navigation menu with various settings categories. The main area is titled 'GVRP Settings' and contains a configuration table for a specific unit. Below this is a 'GVRP Table' showing the configuration for multiple ports.

Navigation Menu:

- Double VLAN
- PVID Auto Assign
- MAC-based VLAN Settings
- Protocol VLAN
- Subnet VLAN
- Trunking
- IGMP Snooping
- MLD Snooping
- Loopback Detection Global
- Spanning Tree
- Forwarding & Filtering
- LLDP
- QinQ
- ERPS
- NLB Multicast FDB Settings

GVRP Settings Configuration:

Unit	From	To	GVRP	Ingress Check	Acceptable Frame Type	PVID	Apply
1	Port 1	Port 1	Disabled	Enabled	Admit All		Apply

GVRP Table:

Port	PVID	GVRP	Ingress Check	Acceptable Frame Type
1	2	Disabled	Enabled	All Frames
2	2	Disabled	Enabled	All Frames
3	8	Disabled	Enabled	All Frames
4	30	Disabled	Enabled	All Frames
5	1	Disabled	Enabled	All Frames
6	1	Disabled	Enabled	All Frames
7	5	Disabled	Enabled	All Frames

Routing Table

Add

IPv4 Static/Default Route Settings

IP Address	Subnet Mask	Gateway	Metric	Protocol	Backup	Weight	Status	Delete
0.0.0.0	0.0.0.0	163.20.209.182	1	Default	Primary	None	Active	X
10.252.29.0	255.255.255.0	10.254.29.1	1	Static	Primary	None	Active	X

Total Entries: 2

監控除錯

設備狀態

Device Status

ID	Internal Power	External Power	Left Fan	Right Fan	Back Fan	CPU Fan
1	Active	Fail	OK	OK	---	OK
2	Active	Fail	OK	OK	---	OK

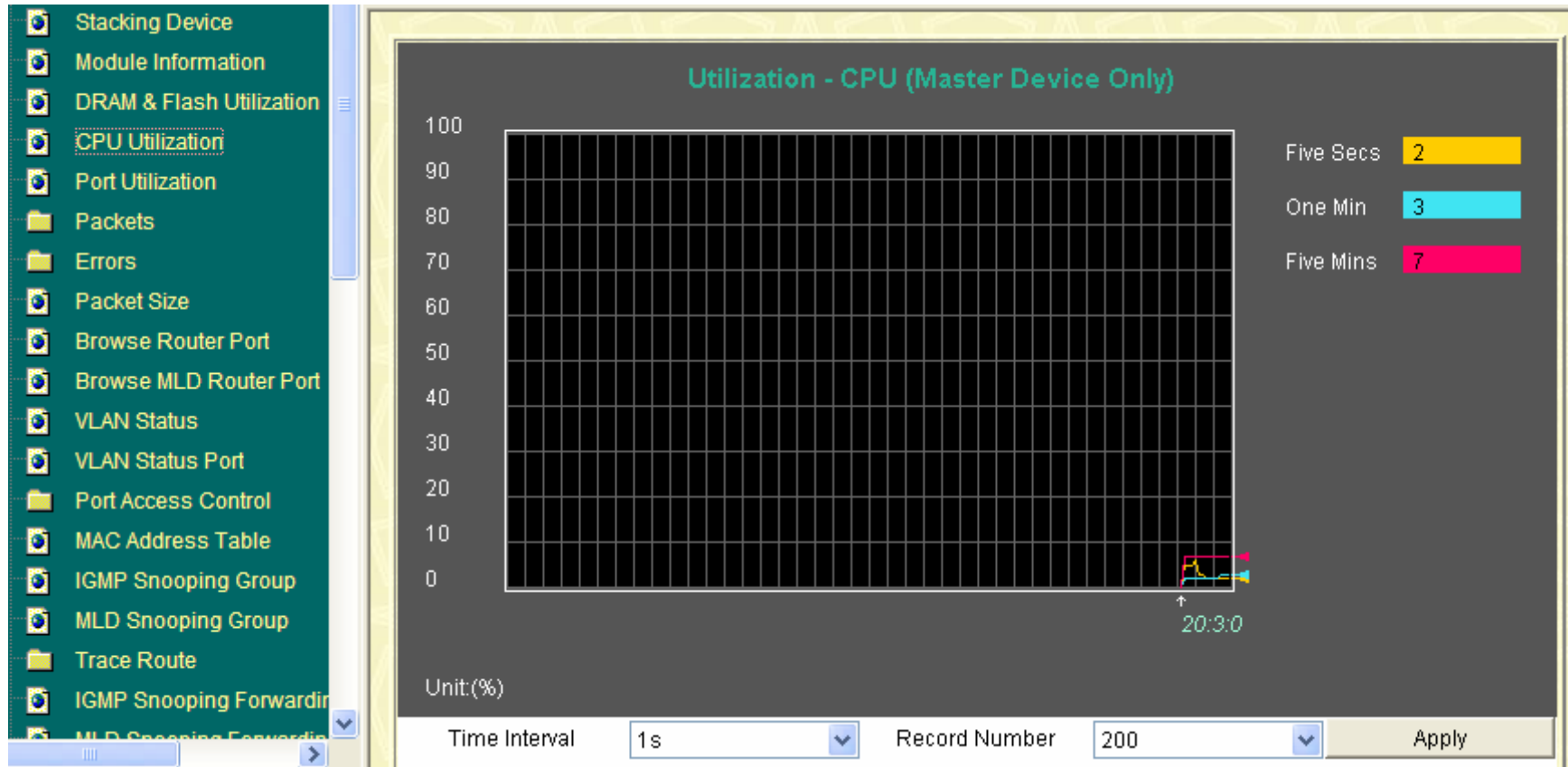
堆疊資訊

Stacking Information

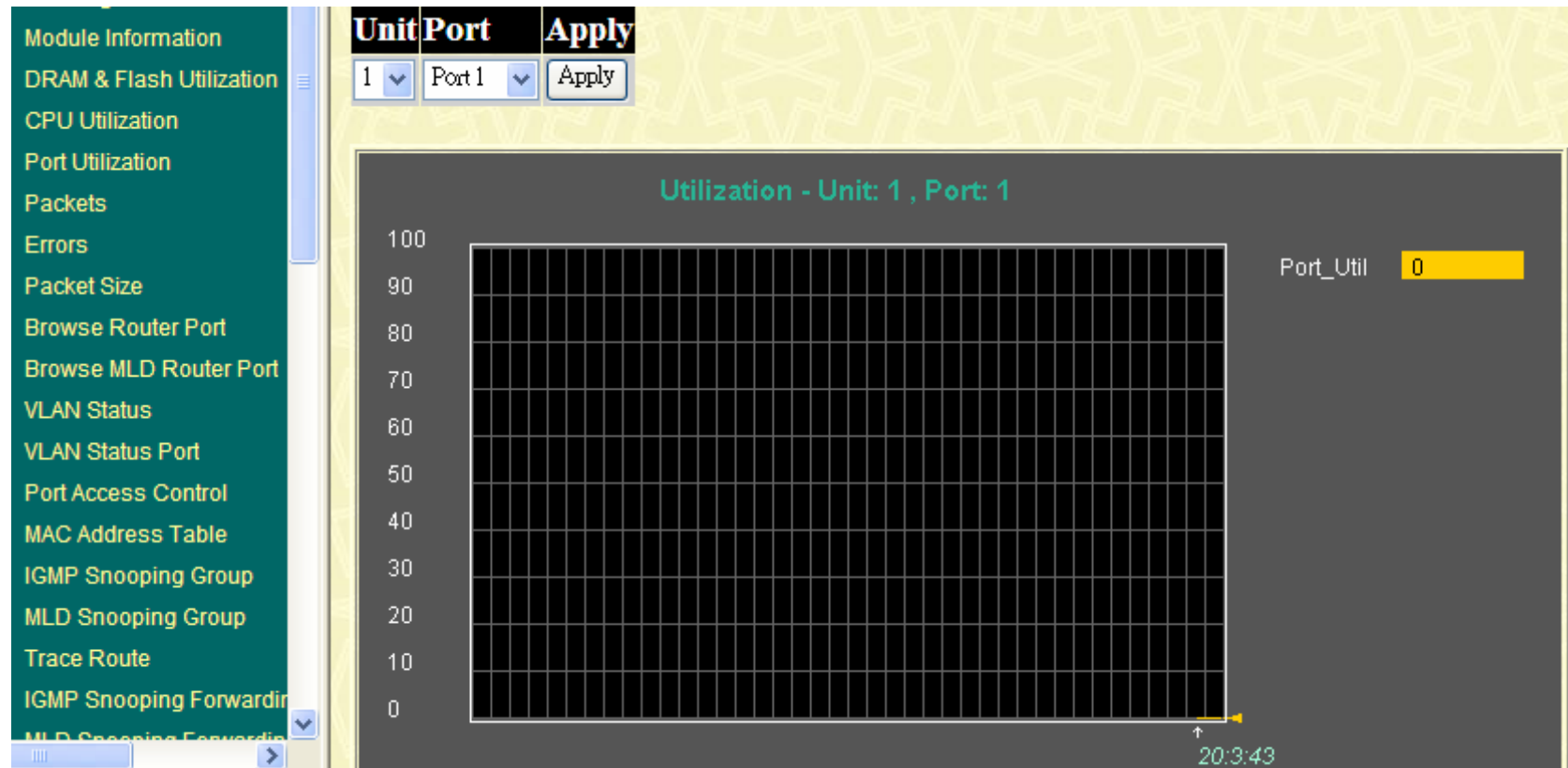
Box ID	User Set	Type	Exist	Priority	MAC Address	PROM Version	Runtime Version	H/W Version
1	User	DGS-3627	Exist	10	00-21-91-A2-AB-00	1.10-B09	2.52.B44	A1
2	User	DGS-3627	Exist	1	00-21-91-A3-6F-00	1.10-B09	2.52.B44	A1
3	___	Not_Exist	No					
4	___	Not_Exist	No					
5	___	Not_Exist	No					
6	___	Not_Exist	No					
7	___	Not_Exist	No					
8	___	Not_Exist	No					
9	___	Not_Exist	No					
10	___	Not_Exist	No					
11	___	Not_Exist	No					
12	___	Not_Exist	No					

Topology : Duplex Chain
My Box ID : 2
Master ID : 2
Backup Master : 1
Box Count : 2

CPU使用率



Port使用率



Log

Switch History Logs				
Sequence	Time	Level	Log Text	
28771	2010-05-10, 20:52:00	INFO(6)	Successful login through Web (Username: admin)	
28770	2010-05-10, 20:51:57	WARN(4)	Login failed through Web (Username: admin)	
28769	2010-05-10, 20:07:35	INFO(6)	Web session timed out (Username: user)	
28768	2010-05-10, 19:50:41	INFO(6)	Successful login through Web (Username: user)	
28767	2010-05-10, 19:19:21	INFO(6)	Web session timed out (Username: user)	
28766	2010-05-10, 19:09:11	INFO(6)	Successful login through Web (Username: user)	
28765	2010-05-10, 19:00:53	INFO(6)	Web session timed out (Username: user)	
28764	2010-05-10, 18:43:58	INFO(6)	Successful login through Web (Username: user)	
28763	2010-05-10, 18:43:55	INFO(6)	Logout through Web (Username: admin)	
28762	2010-05-10, 18:43:07	INFO(6)	Successful login through Web (Username: admin)	
28761	2010-05-10, 18:40:29	INFO(6)	Logout through Telnet (Username: admin, IP: 203.72.153.57)	
28760	2010-05-10, 18:36:20	INFO(6)	Successful login through Telnet (Username: admin, IP: 203.72.153.57)	
28759	2010-05-10, 14:30:34	INFO(6)	Telnet session timed out (Username: admin, IP: 203.72.153.57)	
28758	2010-05-10, 14:14:30	INFO(6)	Successful login through Telnet (Username: admin, IP: 203.72.153.57)	

ARP Table

Interface Name	IP Address	MAC Address	Type
System	10.227.29.0	FF-FF-FF-FF-FF-FF	Local/Broadcast
System	10.227.29.102	00-26-5A-C0-73-40	Dynamic
System	10.227.29.103	00-26-5A-C0-72-5F	Dynamic
System	10.227.29.104	00-26-5A-C0-74-21	Dynamic
System	10.227.29.105	00-26-5A-C0-70-CF	Dynamic
System	10.227.29.106	00-26-5A-C0-72-14	Dynamic
System	10.227.29.107	00-26-5A-E2-6C-00	Dynamic
System	10.227.29.108	00-26-5A-C0-72-91	Dynamic
System	10.227.29.254	00-21-91-A3-6F-00	Local
System	10.227.29.255	FF-FF-FF-FF-FF-FF	Local/Broadcast
lan	163.20.50.0	FF-FF-FF-FF-FF-FF	Local/Broadcast
lan	163.20.50.19	00-15-58-39-D3-E3	Dynamic
lan	163.20.50.20	00-15-58-39-CF-7E	Dynamic
lan	163.20.50.24	00-00-48-0E-15-7E	Dynamic
lan	163.20.50.38	00-0E-0C-61-3F-A2	Dynamic
lan	163.20.50.50	00-15-58-39-D2-85	Dynamic
lan	163.20.50.51	00-00-48-0E-78-A3	Dynamic
lan	163.20.50.58	00-00-48-0E-B0-5F	Dynamic
lan	163.20.50.59	00-00-48-3F-68-1F	Dynamic
lan	163.20.50.71	00-C0-A8-FF-B8-E6	Dynamic

提供設備項目 - L2 POE交換器

DGS-3100-24P/48P L2 POE交換器

➤ 提供高擴充性

- 提供實體堆疊功能

➤ 整合多元化網路應用

- 提供IPv6 MLD Snooping、QoS及ACL機制

➤ 提供穩定安全網路連線

- 實測每埠皆滿足網路電話及無線基地台所需電力

➤ 節能減碳

- 搭配WiNOC排程功能可自動開啟或關閉POE無線基地台或POE網路電話，以節省電費



DGS-3100-24P/48P

DGS-3100基礎操作及簡易故障排除

設備狀態

The screenshot displays the web management interface for a D-Link DGS-3100-24P switch. The top navigation bar includes 'Save', 'Tools', and 'Stack ID'. The main content area is titled 'Device Information' and is divided into two sections: 'Device Information' and 'Device Status and Quick Configurations'.

Device Information

Device Type	DGS-3100-24P ST		
System Contact			
System Name	maes-L2-2	MAC Address	00-26-5a-c0-73-40
System Location		IP Address	10.227.29.102
Firmware Version	3.00.43	Subnet Mask	255.255.255.0
Hardware Version	a1	Default Gateway	10.227.29.254
Serial Number	F3E219C000083(unit 1)	Login Timeout (minutes)	10
System Time	10/05/2010		
System Up Time	108 days 10 hours 5 mins 20 seconds		
Boot version	1.0.1.04		

Device Status and Quick Configurations

Time Source	SNTP setting	Jumbo Frame	Disabled setting
802.1D Spanning Tree	Enabled setting	BPDU Forwarding	Disabled setting
DHCP Client	Disabled setting	IGMP Snooping	Disabled setting
Safeguard Engine	Enabled setting	MLD Snooping	Disabled setting
SNMP Trap	Enabled setting	Broadcast Storm Control	Disabled setting
SSL	Disabled setting	802.1x Status	Disabled setting
Asymmetric VLAN	Disabled setting	GVRP Setting	Disabled setting
VLAN Trunking	Disabled setting	SSH	Disabled setting
Telnet Setting	Enabled setting	Port Mirroring	Disabled setting

Vlan 資訊

802.1Q VLAN

VLAN List

VID	VLAN Name	Untag VLAN Ports	Tag VLAN Ports	Forbidden VLAN Ports		
1	default	1:24, 2:5, 2:23, 2:24, T1-T32			<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
5	lan	1:12	1:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
10	intra-1		1:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
20	Intra-2	1:1-1:11, 1:13-1:23, 2:1-2:4, 2:6-2:22	1:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
25	voip		1:1-1:24, 2:1-2:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
30	wlan		1:24, 2:5, 2:23, 2:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
35	wpa2		1:24, 2:5, 2:23, 2:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>
36	mac_auth		1:24, 2:5, 2:23, 2:24		<input type="button" value="Edit"/>	<input type="button" value="Delete VID"/>

Spanning Tree Protocol

資源說明

Spanning Tree Protocol

為何要使用 Spanning Tree Protocol

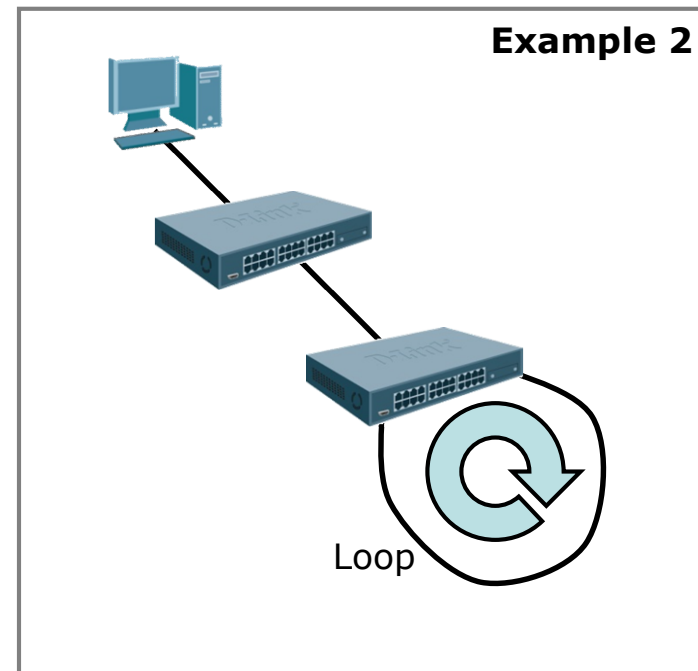
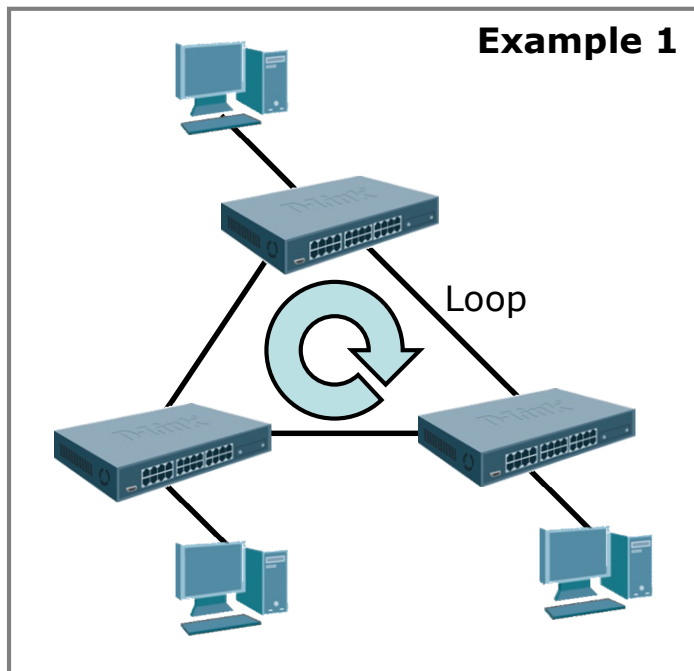
- 防止Loop所造成的網路癱瘓
- 線路備援,預防單點失效

Protocol Versions

- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

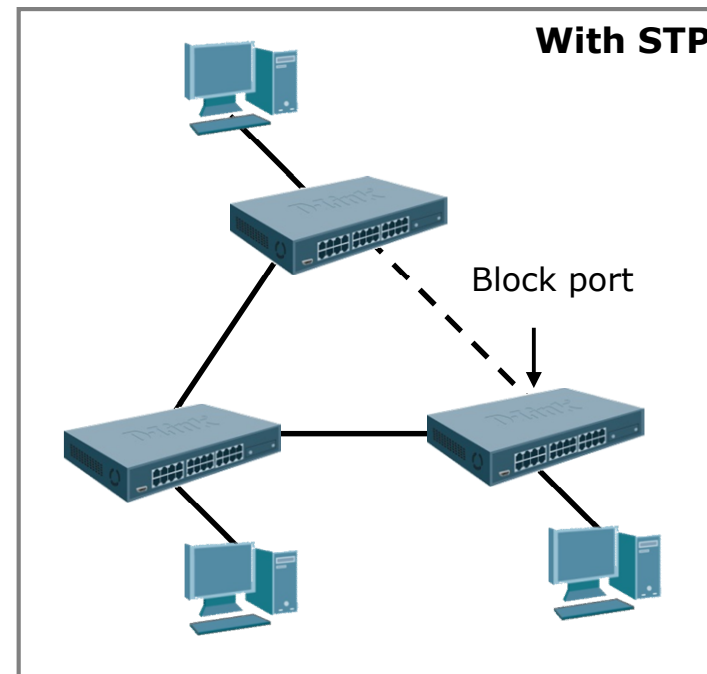
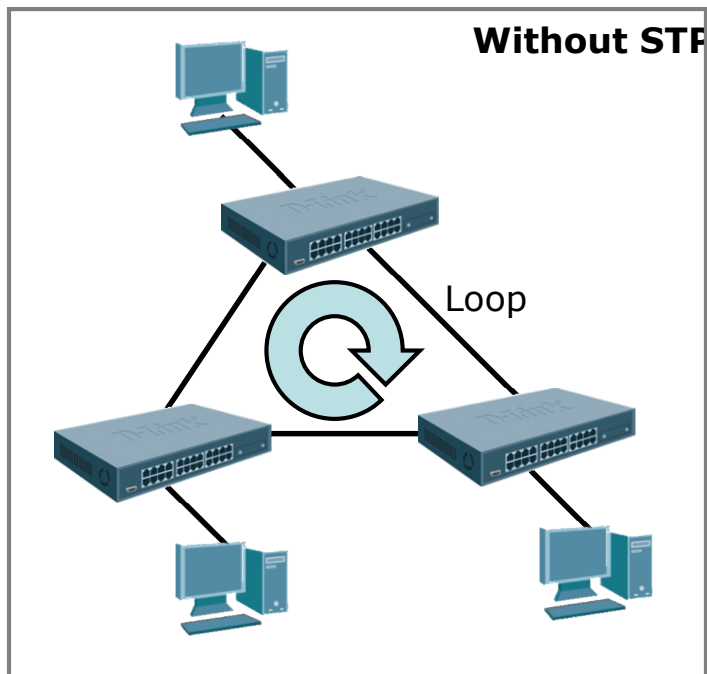
何謂Loop

若在L2環境下有線路的迴圈,它將造成廣播風暴導致網路癱瘓



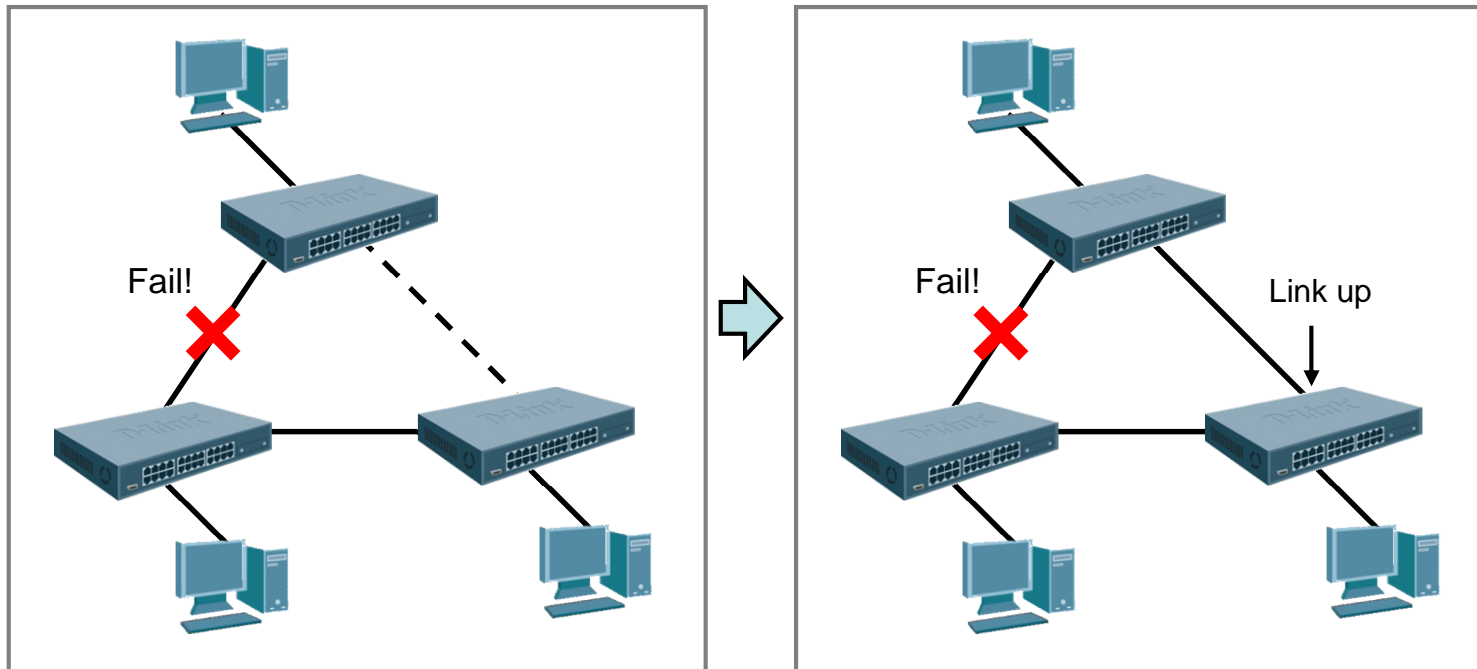
Loop的防範

Spanning Tree Protocol可邏輯性封鎖Loop環境內的Port



線路的備援

Spanning Tree Protocol 有線路備援的效果,當既有連線失效時,被封鎖的 Port 將會解除封鎖,取代失效的連線.



STP & RSTP比較

收斂時間:

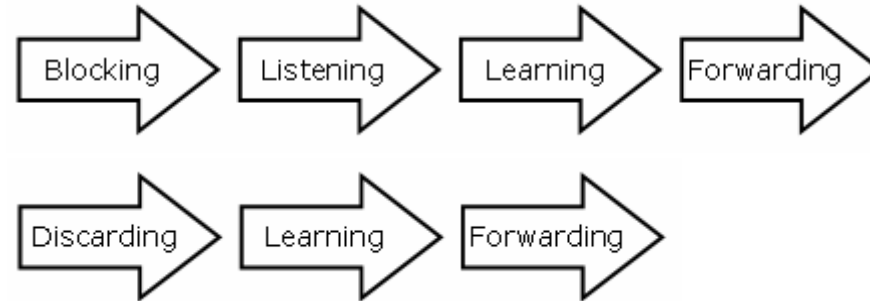
STP 802.1d : 30 Sec.

RSTP 802.1w : 2-3 Sec.

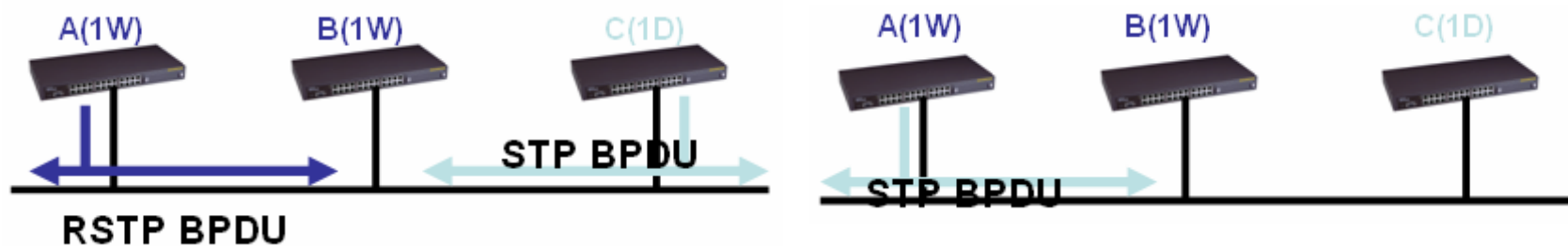
支援運算設備數:

STP 802.1d : 7 hops

RSTP 802.1w : 18 hops



*若網路上同時存在802.1d & 802.1w設備時,802.1w的設備將向下相容於802.1d.



STP功能

STP Bridge Global Settings

STP Global Setting

STP Status Enabled Disabled

STP Version

Forwarding BPDU

Loopback Detection

Bridge Priority (0 - 61440)

Bridge Max Age (6 - 40) sec

Bridge Hello Time (1 - 10) sec

Bridge Forward Delay (4 - 30) sec

Max Hops (1 - 20) times

LBD Recovery Time (30 - 86400) sec

Note: Loopback detection is enabled when STP is enabled.

STP Port狀態

MSTI Config Information Safeguard

Unit: Port: Find

Edit MSTI Port Setting

Instance ID:

Internal Path Cost:

Priority:

Apply

Msti	Designated Bridge	Internal Path Cost	Priority	Status	Role	
1	N/A	2000000	128	Disabled	Designated	Edit
2	N/A	2000000	128	Disabled	Designated	Edit
3	N/A	2000000	128	Disabled	Designated	Edit
4	N/A	2000000	128	Disabled	Designated	Edit
5	N/A	2000000	128	Disabled	Designated	Edit
6	N/A	2000000	128	Disabled	Designated	Edit
7	N/A	2000000	128	Disabled	Designated	Edit
8	N/A	2000000	128	Disabled	Designated	Edit
9	N/A	2000000	128	Disabled	Designated	Edit
10	N/A	2000000	128	Disabled	Designated	Edit

PoE 資訊

PoE Port Setting

Unit: 02 From Port: 01 To Port: 01 PoE Enable: Enabled Power limit: (W) Apply Reset

Note : The max power output of Class 0 is 15.4W, Class 1 is 4W, Class 2 is 7W, Class 3 is 15.4W.

Port	PoE Enable	Power limit	Power(W)	Voltage(V)	Current(mA)	Classification	Status
2:1	Enabled	15.4	0	0	0	Class 0	search
2:2	Enabled	15.4	0	0	0	Class 0	search
2:3	Enabled	15.4	0	0	0	Class 0	search
2:4	Enabled	15.4	0	0	0	Class 0	search
2:5	Enabled	15.4	9.2	50.7	181	Class 3	delivering
2:6	Enabled	15.4	0	0	0	Class 0	search
2:7	Enabled	15.4	0	0	0	Class 0	search
2:8	Enabled	15.4	0	0	0	Class 0	search
2:9	Enabled	15.4	0	0	0	Class 0	search
2:10	Enabled	15.4	0	0	0	Class 0	search
2:11	Enabled	15.4	0	0	0	Class 0	search
2:12	Enabled	15.4	0	0	0	Class 0	search
2:13	Enabled	15.4	0	0	0	Class 0	search
2:14	Enabled	15.4	0	0	0	Class 0	search
2:15	Enabled	15.4	0	0	0	Class 0	search
2:16	Enabled	15.4	0	0	0	Class 0	search
2:17	Enabled	15.4	0	0	0	Class 0	search
2:18	Enabled	15.4	0	0	0	Class 0	search
2:19	Enabled	15.4	0	0	0	Class 0	search

PoE資訊(2)

PoE System Setting	
Unit	01
System Power Threshold	370W
Disconnect Method	Deny next port
System Power Status	
System Budget Power	370 W
Support Total Power	0 W
Remainder Power	370 W
The ratio of system power supply	0.00

Log

System Log

ID	Time	Log Description
1	10-May-2010 21:28:26	%AAA-I-CONNECT: New http connection for user admin, source 203.72.153.57 destination 10.227.29.102 ACCEPTED
2	10-May-2010 21:27:44	%AAA-I-DISCONNECT: http connection for user admin, source 203.72.153.57 destination 10.227.29.102 TERMINATED
3	10-May-2010 21:12:27	%AAA-I-CONNECT: New http connection for user admin, source 203.72.153.57 destination 10.227.29.102 ACCEPTED
4	10-May-2010 20:59:10	%LINK-W-Down: 2:1
5	10-May-2010 20:32:55	%STP-W-PORTSTATUS: 2:1: STP status Forwarding
6	10-May-2010 20:32:25	%LINK-I-Up: 2:1
7	10-May-2010 20:32:24	%LINK-W-Down: 2:1
8	10-May-2010 20:15:23	%STP-W-PORTSTATUS: 2:1: STP status Forwarding
9	10-May-2010 20:14:53	%LINK-I-Up: 2:1
10	10-May-2010 20:14:51	%LINK-W-Down: 2:1
11	10-May-2010 20:14:29	%LINK-I-Up: 2:1
12	10-May-2010 20:14:27	%LINK-W-Down: 2:1
13	10-May-2010 16:30:01	%LINK-W-Down: 1:16
14	10-May-2010 16:29:55	%LINK-I-Up: 1:16
15	10-May-2010 16:29:53	%LINK-W-Down: 1:16
16	10-May-2010 16:17:55	%STP-W-PORTSTATUS: 1:14: STP status Forwarding
17	10-May-2010 16:17:25	%LINK-I-Up: 1:14
18	10-May-2010 16:17:23	%LINK-W-Down: 1:14
19	10-May-2010 16:10:13	%LINK-W-Down: 1:22
20	10-May-2010 16:09:44	%STP-W-PORTSTATUS: 1:15: STP status Forwarding
21	10-May-2010 16:09:14	%LINK-I-Up: 1:15
22	10-May-2010 16:09:12	%LINK-W-Down: 1:15
23	10-May-2010 16:08:51	%STP-W-PORTSTATUS: 1:22: STP status Forwarding
24	10-May-2010 16:08:24	%LINK-I-Up: 1:22

MAC Address Table

MAC Address Table

Unit: Port:

VLAN Name:

MAC Address:

Total entries on this page: 90.

VID	VLAN Name	MAC Address	Unit	Port	Type
1	Default	00-21-91-A3-6F-00	1	1:24	Dynamic
1	Default	00-26-5A-C0-70-CF	1	1:24	Dynamic
1	Default	00-26-5A-C0-72-14	1	1:24	Dynamic
1	Default	00-26-5A-C0-72-5F	1	1:24	Dynamic
1	Default	00-26-5A-C0-72-91	1	1:24	Dynamic
1	Default	00-26-5A-C0-74-21	1	1:24	Dynamic
1	Default	00-26-5A-E2-6C-00	1	1:24	Dynamic
5	lan	00-00-48-0E-15-7E	1	1:24	Dynamic
5	lan	00-00-48-0E-78-A3	1	1:24	Dynamic
5	lan	00-00-48-0E-B0-5F	1	1:24	Dynamic
5	lan	00-00-48-3F-68-1F	1	1:24	Dynamic
5	lan	00-00-48-49-A8-66	1	1:24	Dynamic
5	lan	00-00-48-49-A8-68	1	1:12	Dynamic
5	lan	00-04-E2-9A-F9-D3	1	1:24	Dynamic
5	lan	00-04-E2-B6-28-40	1	1:24	Dynamic
5	lan	00-00-00-00-00-00	1	1:24	Dynamic

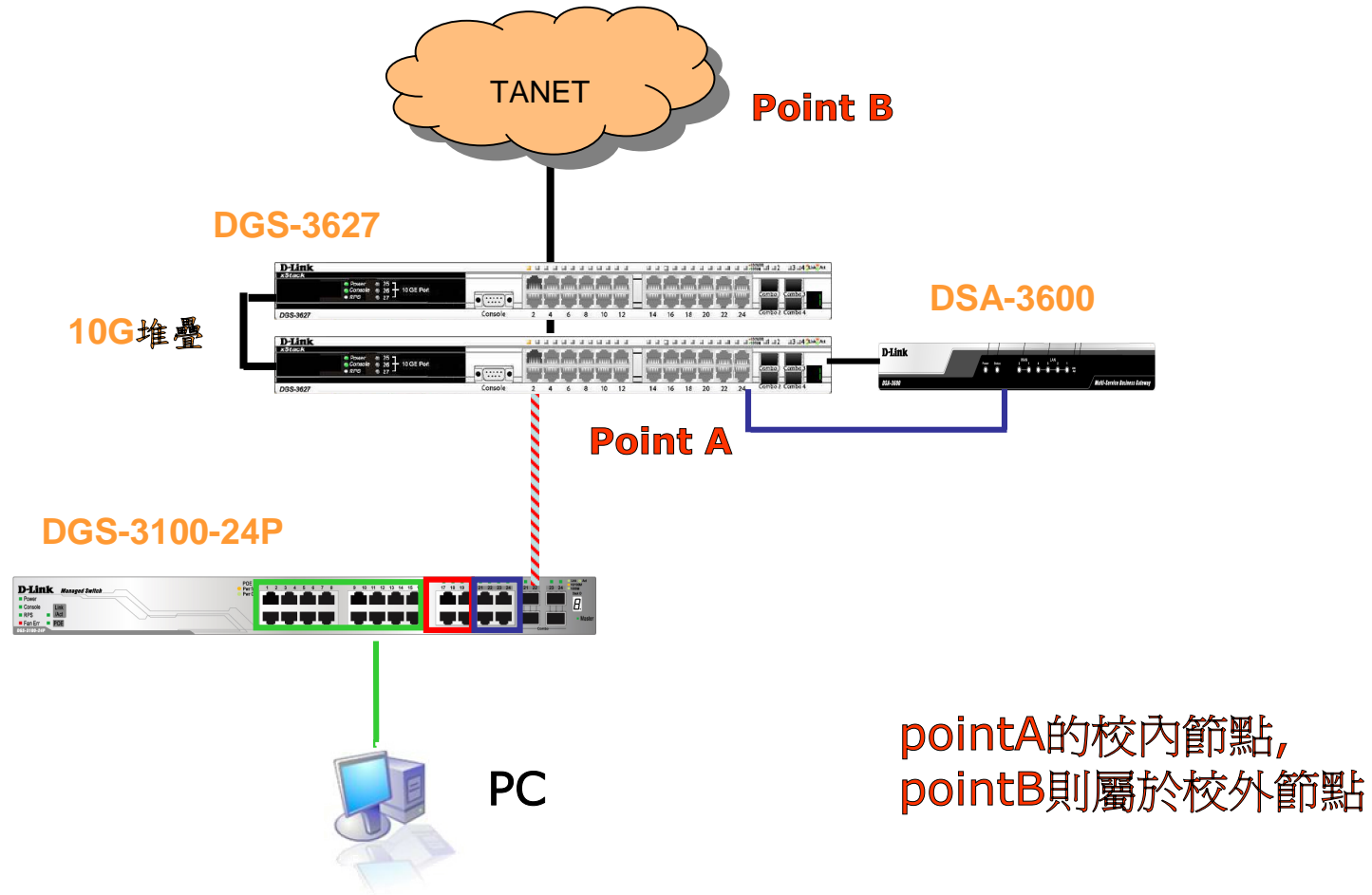
登入DGS-3600/3100帳號密碼

- › 學校老師可透過一般帳號登入取得user level的權限查看相關資料與軟體體狀況例如CPU使用率,流量狀態等

常見問題說明

- › 網路無法連線
- › 非法DHCP Server
- › Loop發生判斷
- › Giga介面連線問題

網路無法連線



除錯方向

- › Step1:確認是否取得IP

Ipconfig /all

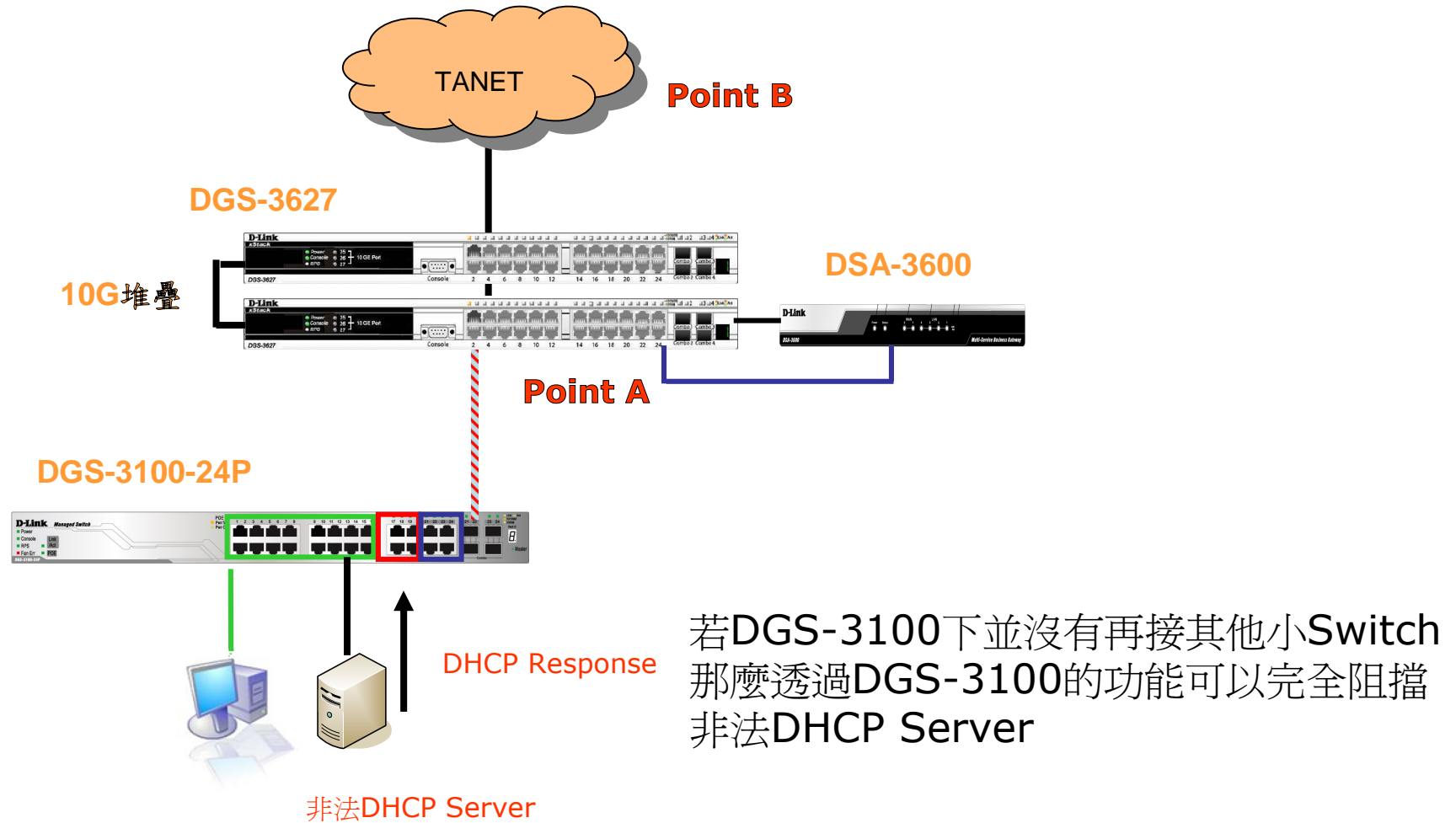
- › Step2:使用tracert工具查詢各節點IP,第一個節點IP為校內,其餘為校外

tracert -d 168.95.1.1

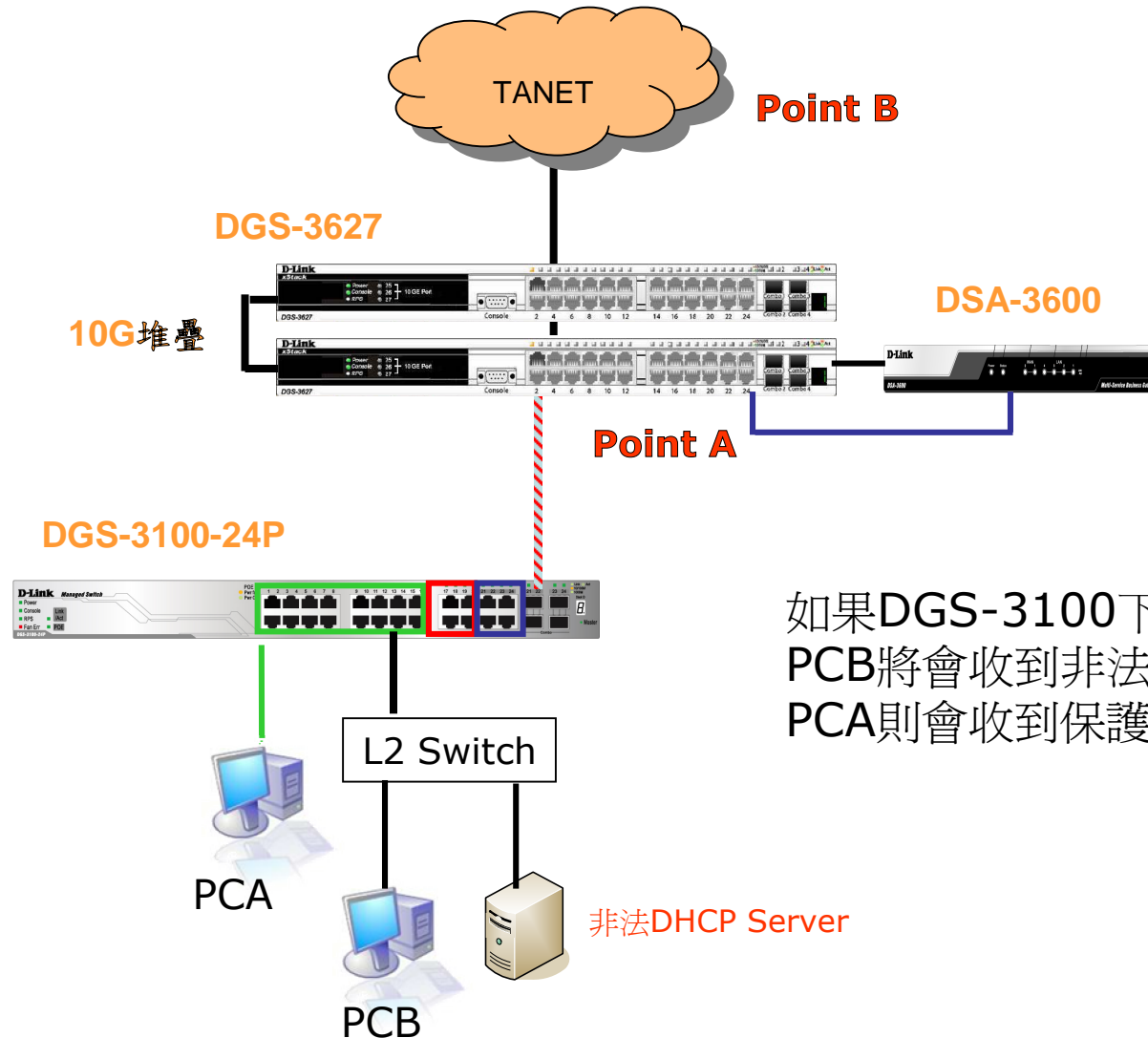
- › Step3:依照步驟二所顯示的各節點IP,開啟數個DOS視窗使用ping <ip> -t方式監控節點,用以判斷網路異常或是不穩定的位置,以釐清是校內問題還是教研中心端問題

Ping <ip> -t

非法DHCP Server—Status1



非法DHCP Server—Status2



如果DGS-3100下接小Switch,那麼
PCB將會收到非法DHCP Server所送的IP,
PCA則會收到保護不影響

Giga 介面連線問題

- › 具備Gigabit介面的設備,若連線速度欲達到1G的頻寬,則網路線8心線缺一不可,若有缺可能只會有100M的速度或是無法連線的狀況

DGS-3100設定指令

- › 針對規劃用來接PC的Port執行以下的功能,本範圍Port 1-16用來接PC
- › `create access_profile profile_id 1 ip udp src_port_mask ffff`
- › `config access_profile profile_id 1 add access_id 1 ip udp src_port 67
ports 1-16 deny`

Loop發生判斷

- › L2 Switch的Port燈號閃爍一致且快速
- › 監看交換器流量狀態如下

Port1下方造成loop,Switch自Port1接收大量封包後,轉送至Port2-7等有連線的設備上,造成網路癱瘓,拔除Port1將恢復正常

Port	TX/sec	RX/sec	Util	Port	TX/sec	RX/sec	Util
1	0	105041	50	21	0	0	0
2	105039	0	50	22	0	0	0
3	105039	0	50	23	0	0	0
4	105039	0	50	24	0	0	0
5	105038	0	50	25	0	0	0
6	105038	0	50	26	0	0	0
7	105039	0	50	27	0	0	0
8	0	0	0	28	0	0	0
9	0	0	0				

無線網路接取基地台 DAP-2590

基礎操作及簡易故障排除

802.11 WLAN

WLAN 三大要素



天線
(Antenna)



無線區域網路卡
(Wireless NIC)

無線橋接器
Access Point



WLAN 特性

相較於有線網路, 無線網路的優缺點:

› 優點

- 彈性大
- 適性強
- 安裝易

› 缺點

- 資料傳輸率(throughput)較低
- 易受干擾

WLAN標準的發展(1)

› IEEE 802.11 (1997)

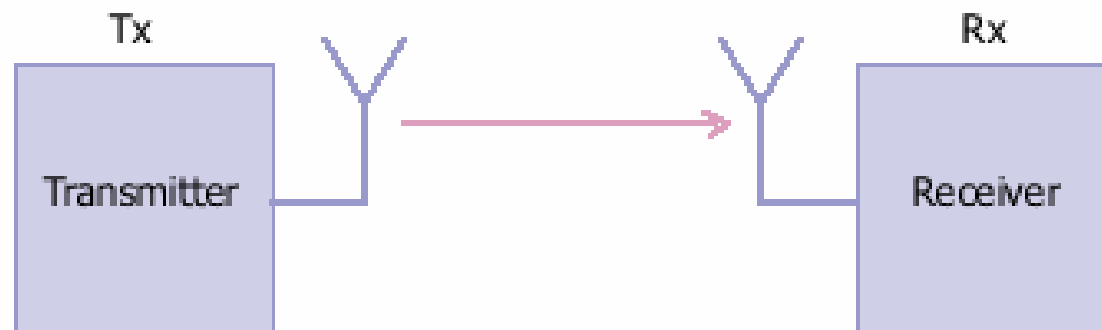
- 第一個標準。
- 2.4GHz頻段及紅外線進行傳輸。
- 1或2Mbps的資料傳輸率。

› IEEE 802.11b (1999)

- 2.4GHz頻段,
- 傳輸率升至11Mbps。
- Wi-Fi認證:以此標準開始推展。

WLAN標準的發展(2)

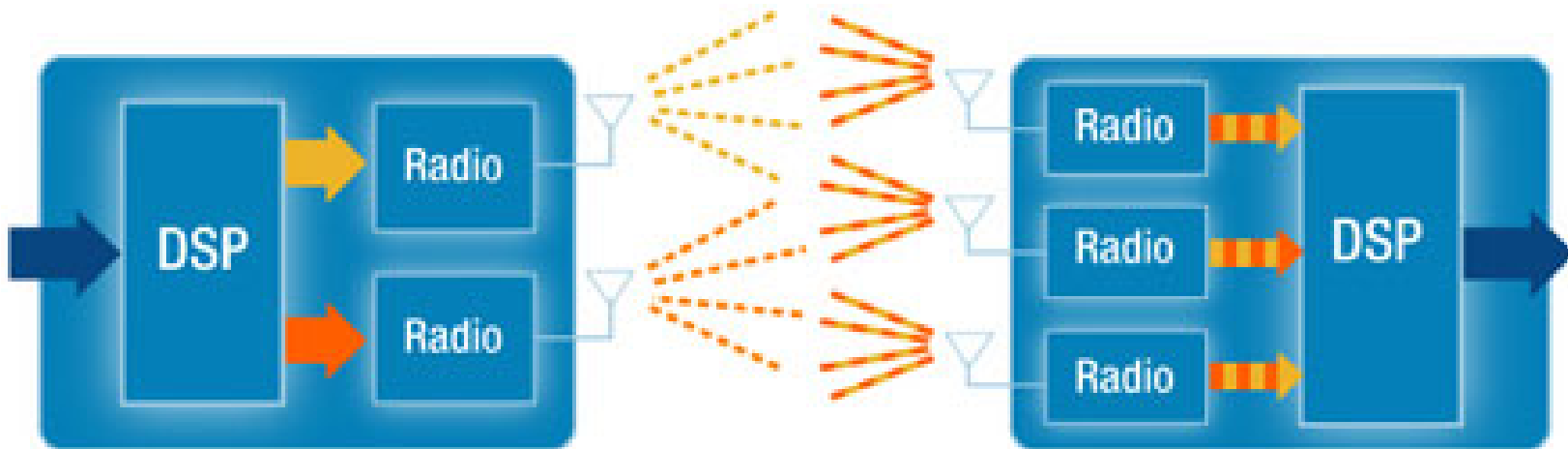
- › IEEE 802.11a (1999)
 - 5GHz頻段。
 - 54Mbps。
- › IEEE 802.11g (2003)
 - 802.11b相容。
 - 2.4GHz頻段。
 - 54Mbps。



WLAN標準的發展(3)

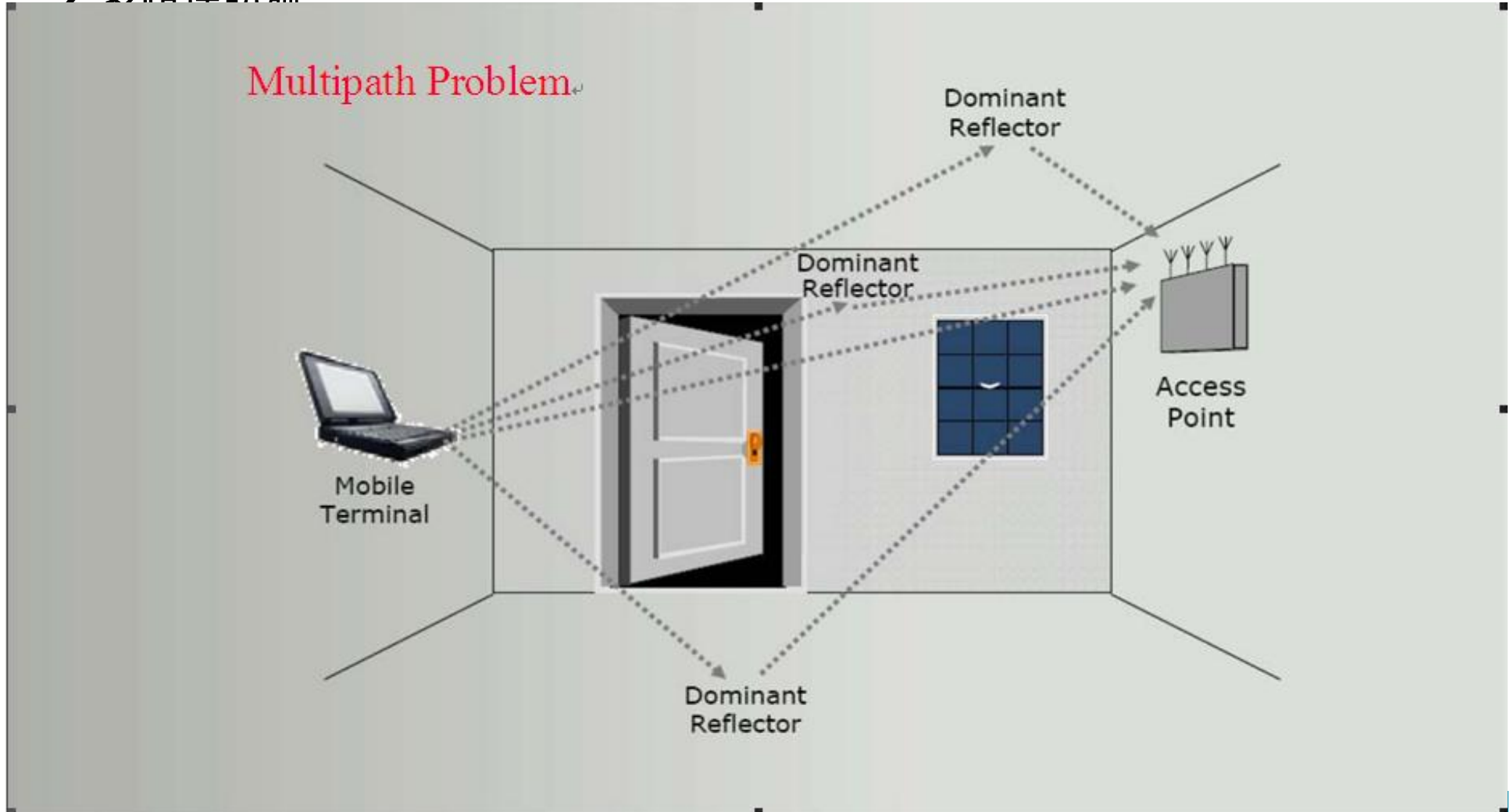
› IEEE 802.11n (2006)

- 與802.11a/b/g相容。
- 傳輸率可達100-300Mbps。
- 以MIMO技術克服Multipath。

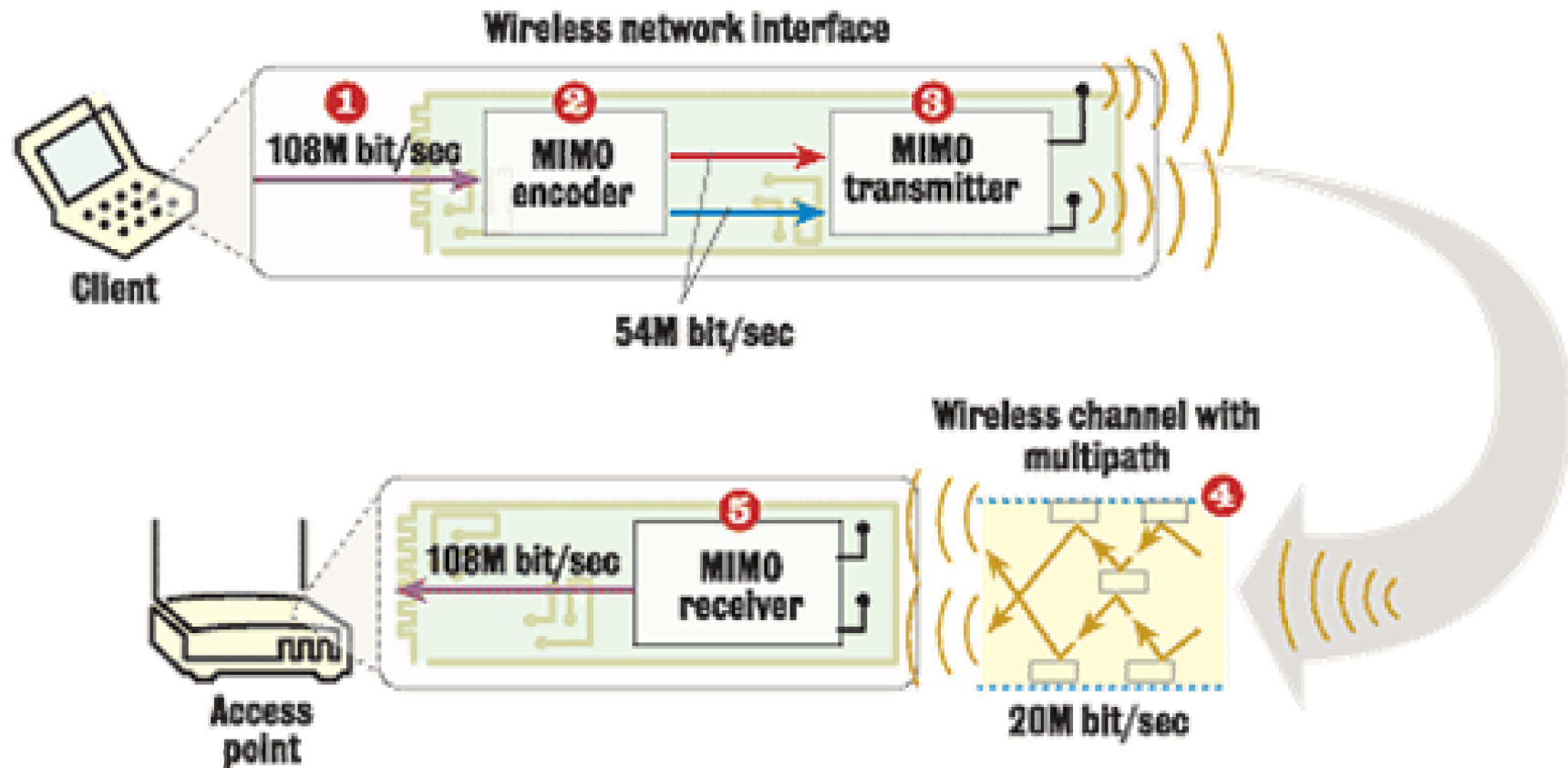


MIMO如何運作

多路徑訊號



MIMO如何運作



Wireless 無線效能差異比較

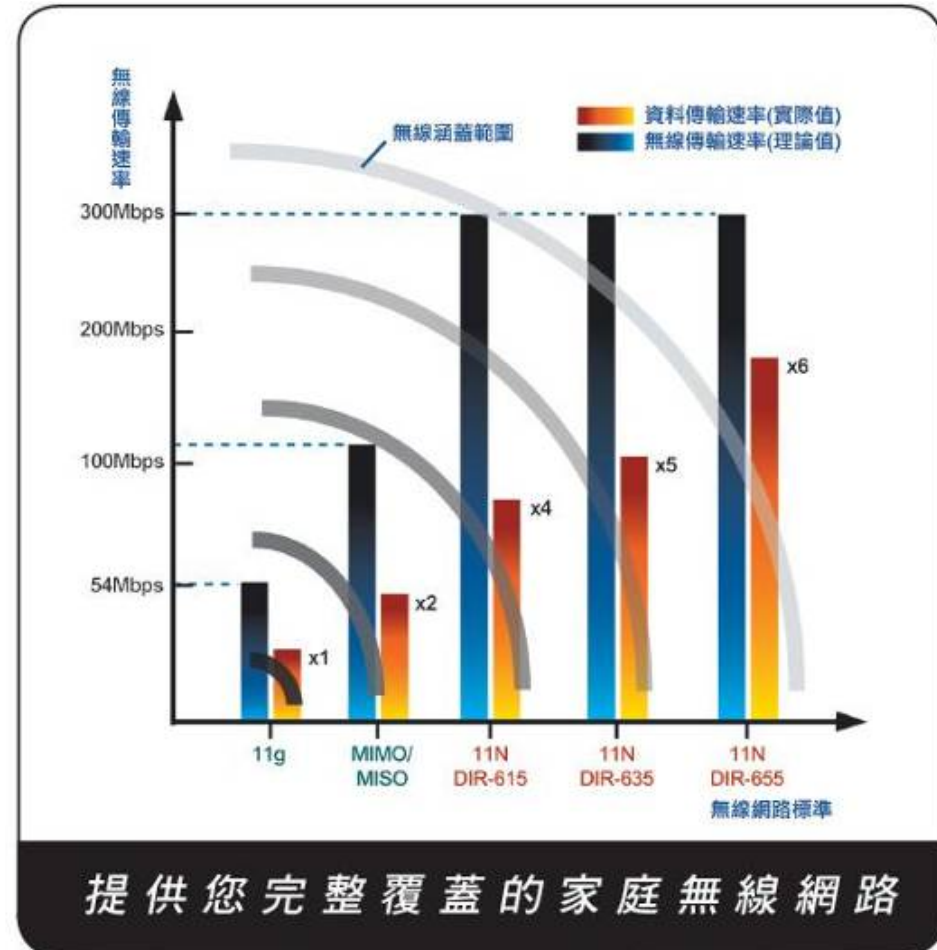
› 802.11g 無線標準

- SISO (單一天線1TX/1RX)
- 實體層傳輸速率 54Mbps
- 應用層傳輸速率 25Mbps

› 802.11n 無線標準

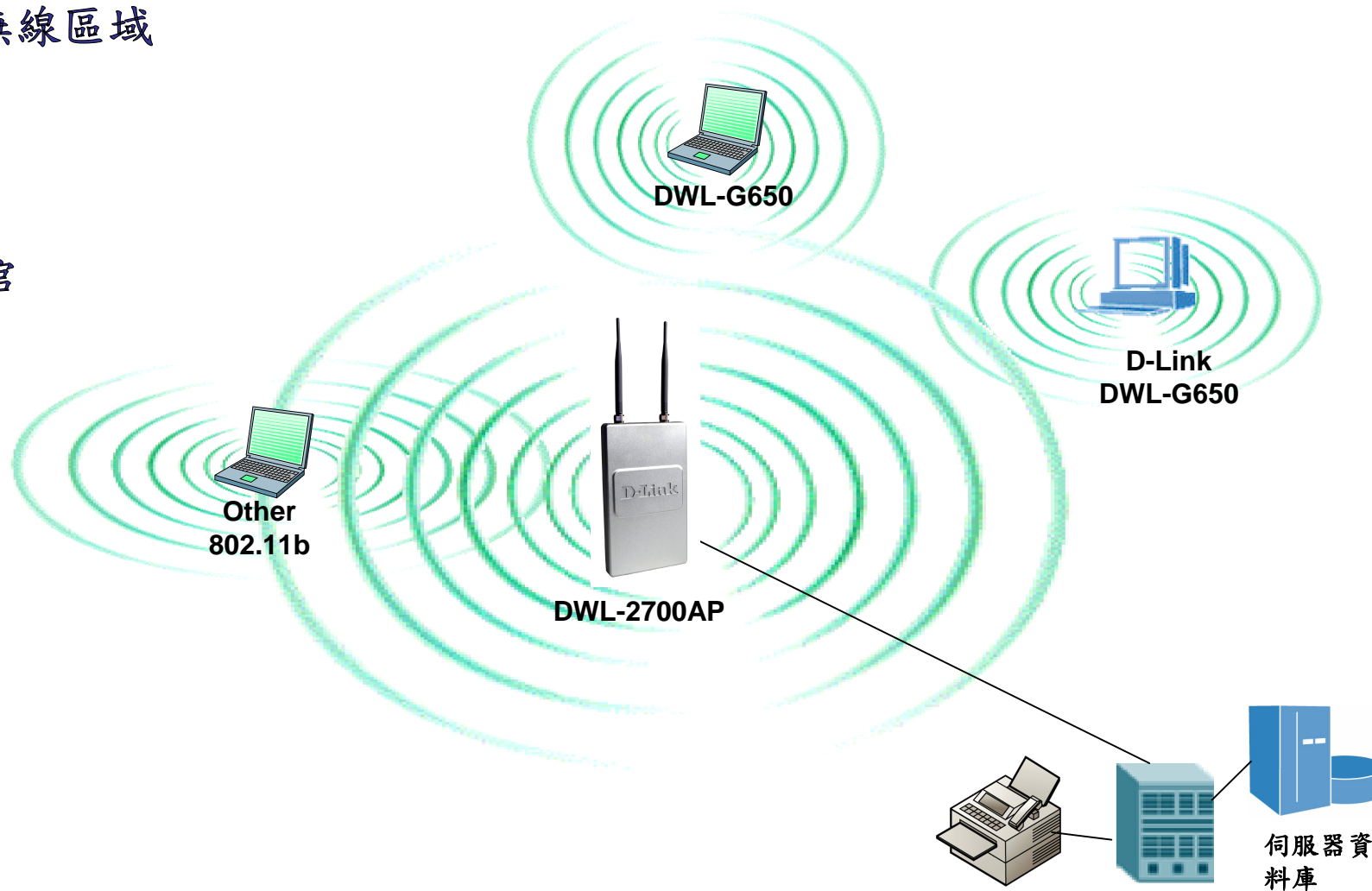
- MIMO (多組天線技術)
- 實體層傳輸速率 300Mbps
- 應用層傳輸速率
- DIR-615 2TX/2RX : 80Mbps
- DIR-635 2TX/3RX : 100Mbps
- DIR-655 2TX/3RX : 150Mbps

測試數據為搭配D-Link Wireless N 無線網



標準存取節點模式

- 廣大無線區域
- 應用
- 倉庫
- 圖書館
- 醫院



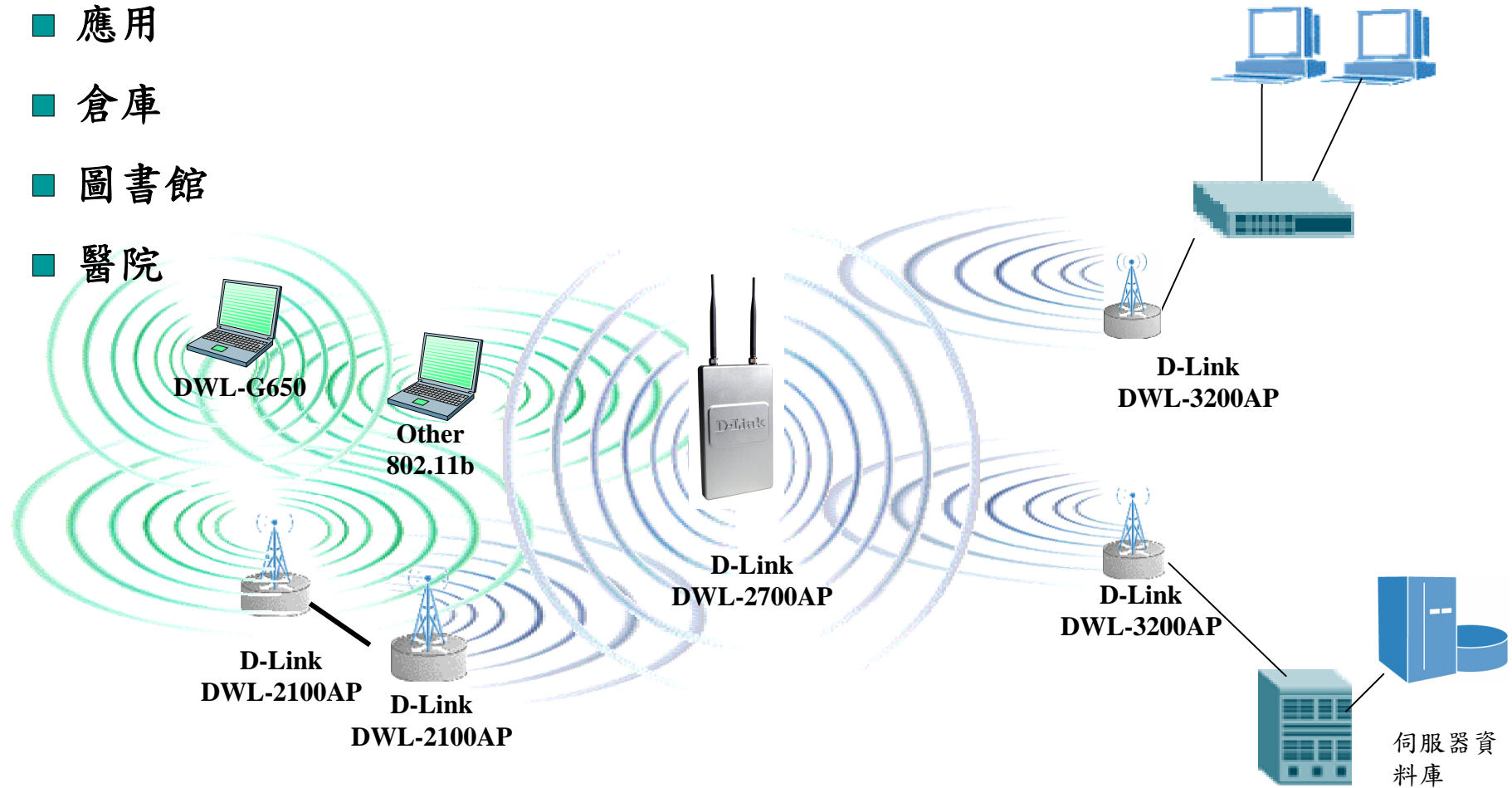
點對點橋接模式

- 高達**22/54/108Mbps**兩個網路無線連接
- 避免昂貴的鋪線費用
- 可選擇天線
- 室內工作站應用



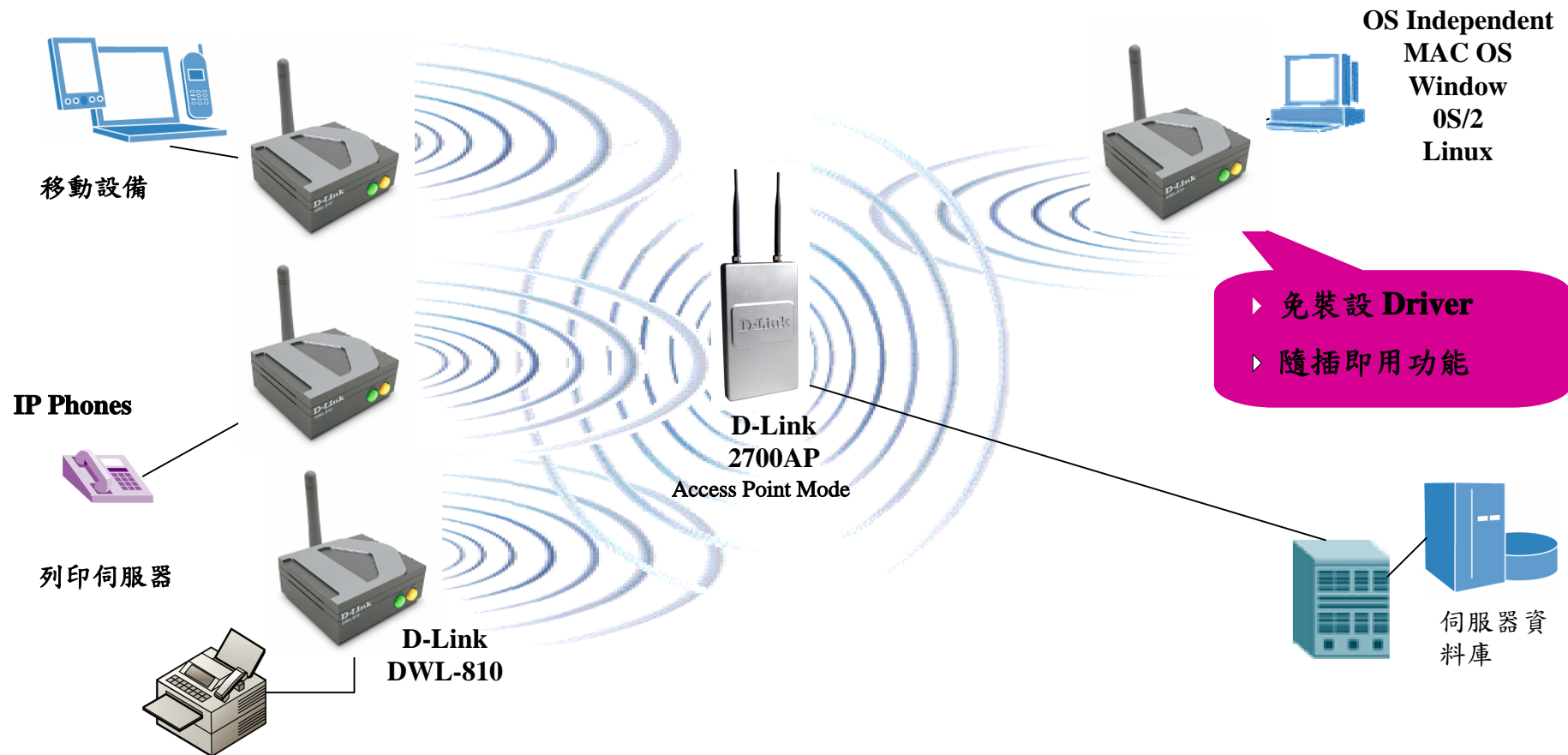
點對多點模式

- 廣大無線區域
- 應用
- 倉庫
- 圖書館
- 醫院



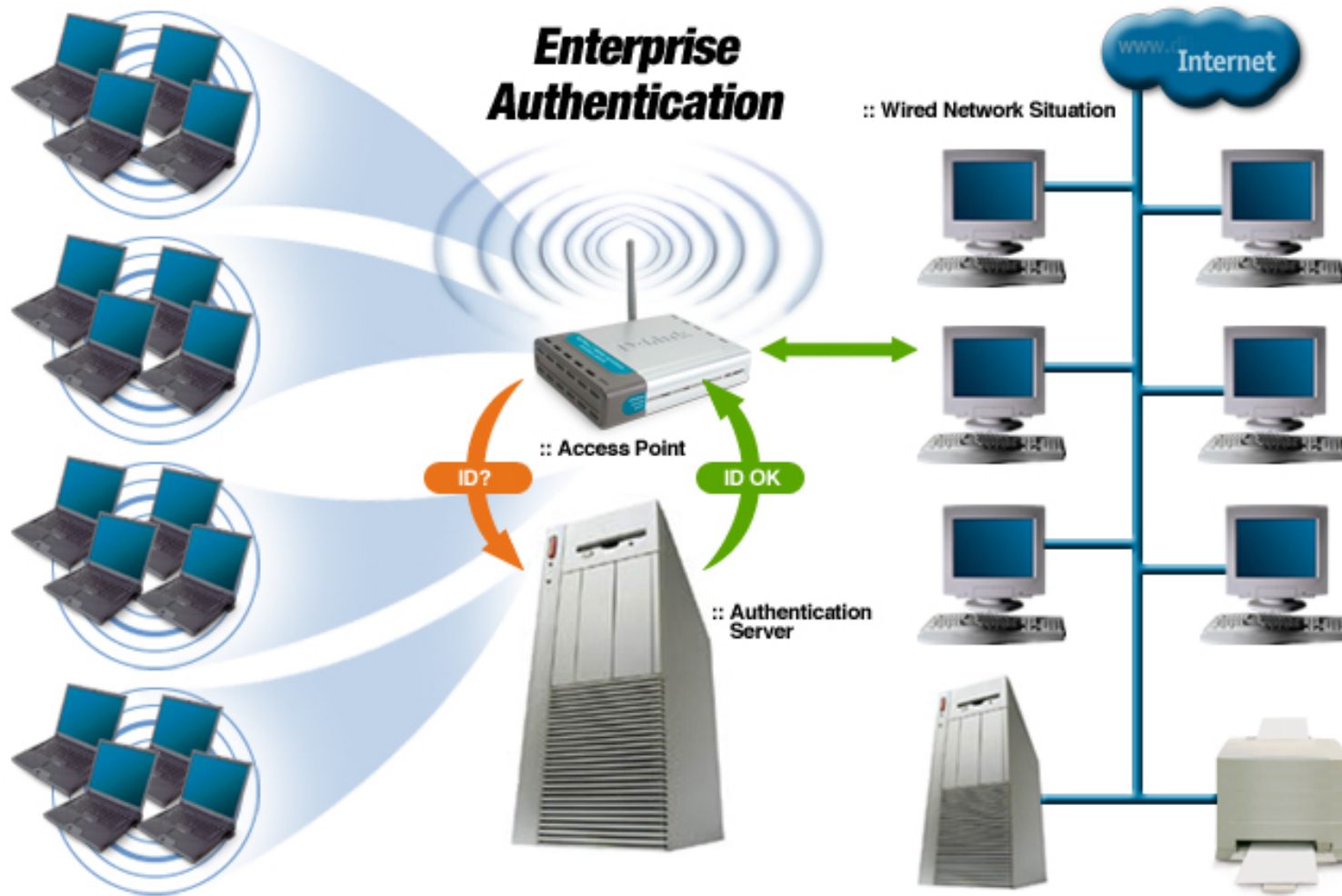
用戶橋接模式

- 能夠將任何標準的乙太網設備轉換成標準用戶 802.11b
- 無須安裝驅動程式



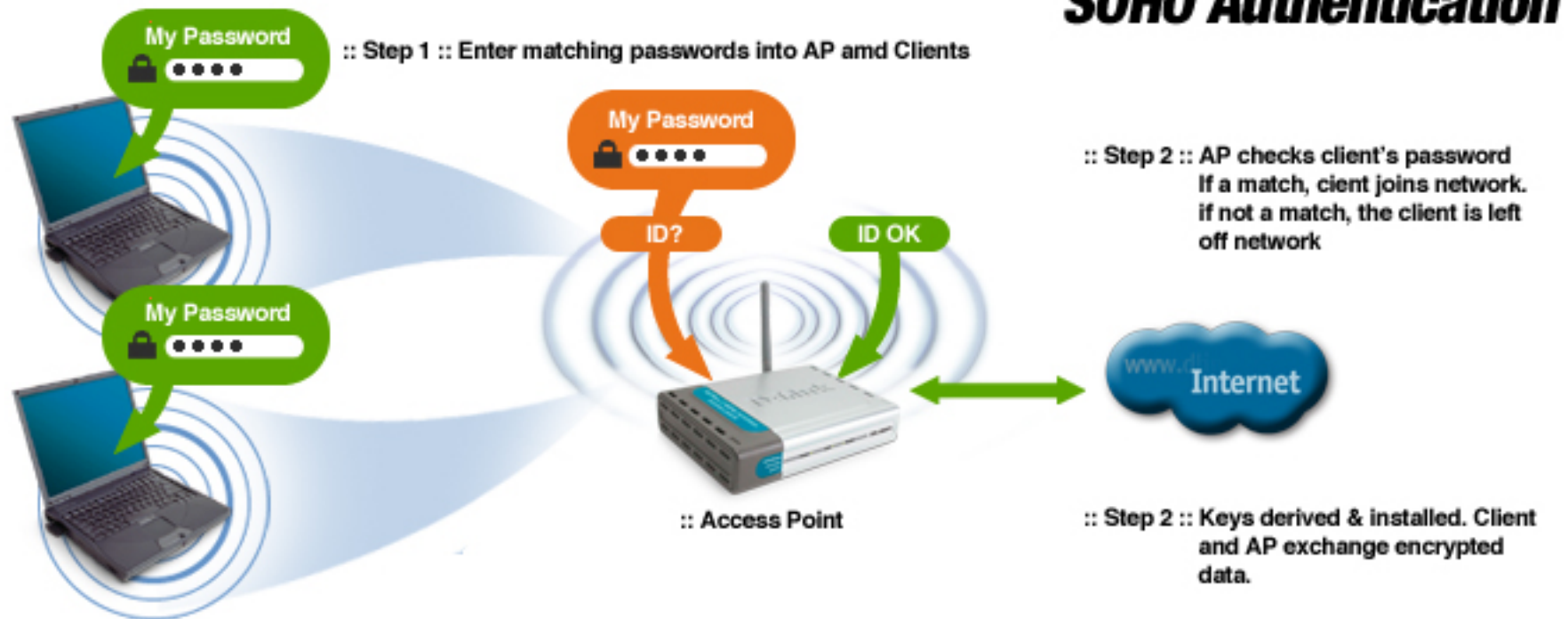
安全性-企業驗證流程

- Extensible Authentication Protocol (WPA-EAP)



安全性-小型辦公室與SOHO族

- Pre-Shared Key (WPA-PSK)



性能 Performance

■ 實際的傳輸效能約為號稱的1/3~1/2

- 以802.11b(11Mbps)為例, 實際上只有4~6Mbps max

■ 影響性能的主要因素有

- 不規律性的無線電波通訊
- 強烈的無線電波環境
- 建築物結構
- 基地台安置的地點
- 使用的人數
- 資料量的多寡

■ 實際上, 要精確評估性能指標是很困難的

無線可用範圍Range

■ 一般我們都說在室內空間可達100公尺，開放空間可達300公尺

- 實際上的設定合理的範圍約為
 - 30~50公尺 1Mbps
 - 10~25公尺 11Mbps
- 影響無線涵蓋範圍的因素有
 - 建築物的結構與天線的方位(定位)
 - 建築物的死角
 - 溫度

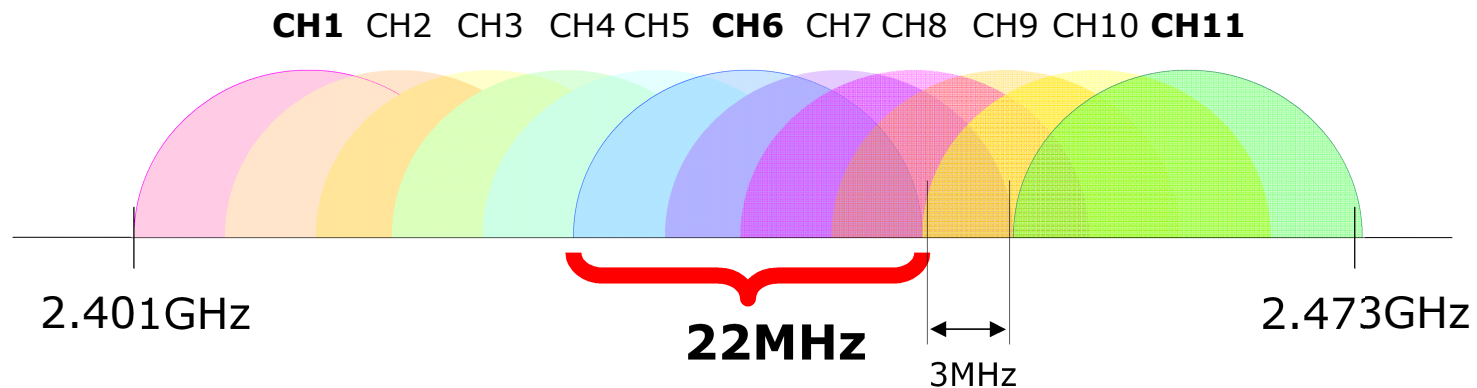
■ 解決方法:增加AP數量

安全 Safe

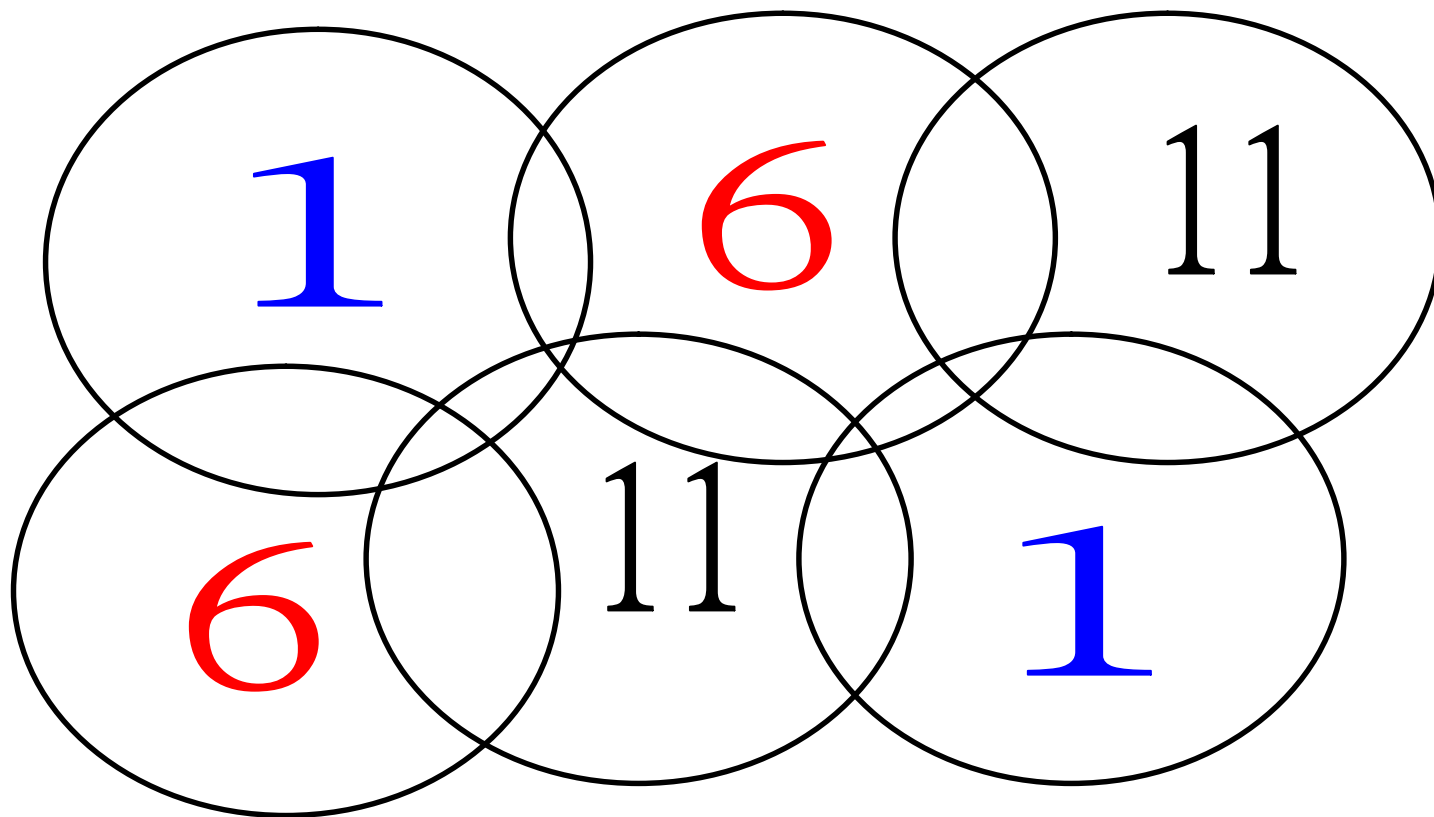
- 無線通訊到底安不安全
 - 無線一般的輸出功率約為100mW
 - 手機輸出功率範圍為600mW
 - 無線電對講機到5W!
- 加上政府嚴格的規定(如我國交通部的DGT)
- 是的, 請客戶無須度過擔心, **Wireless is Safe**

802.11b & 11g 無線網路可用的頻道

- 在2.4GHz ISM中，同一空間、欲避免干擾，可以選擇第1、6、11等三個頻道 (相隔5頻道，中心頻距25MHz)。

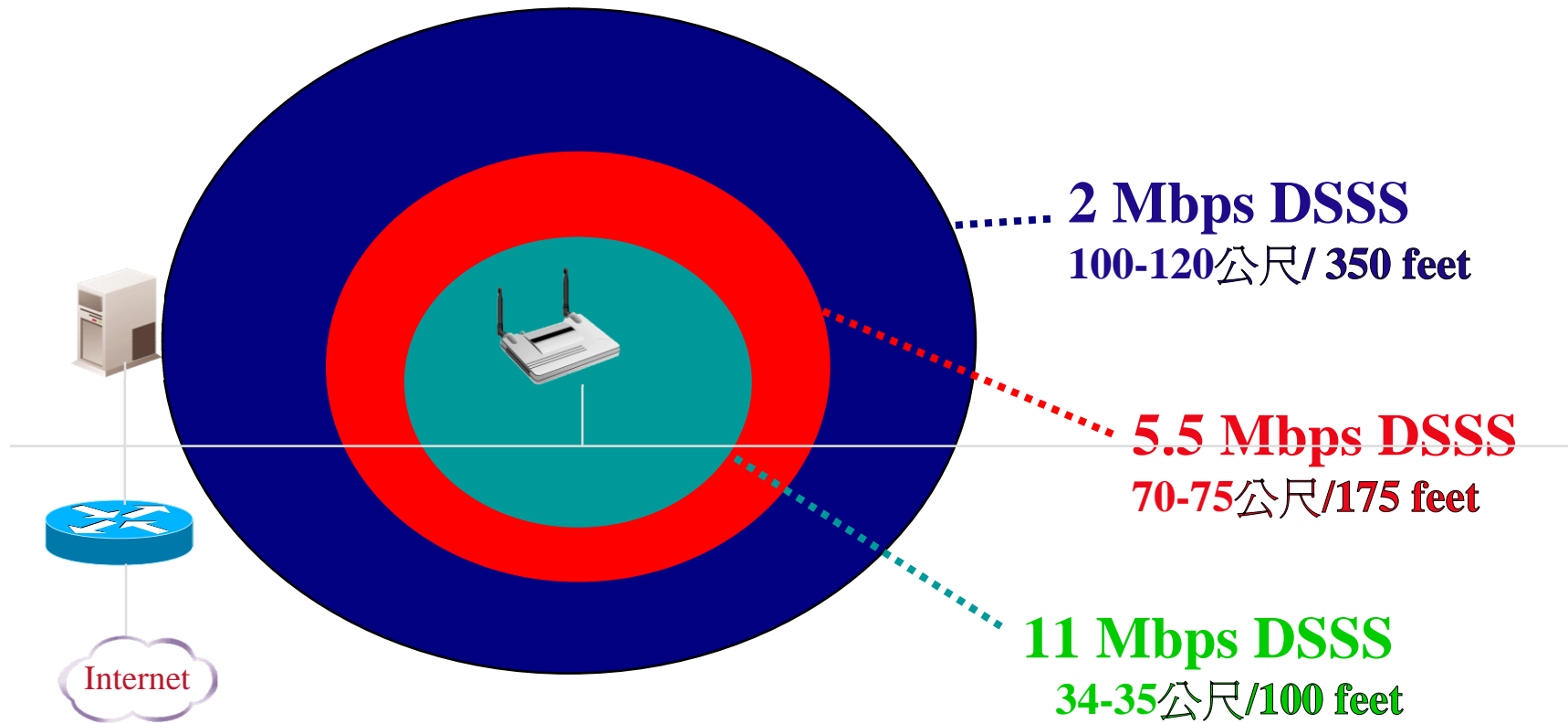


多AP時Channel規劃簡示圖



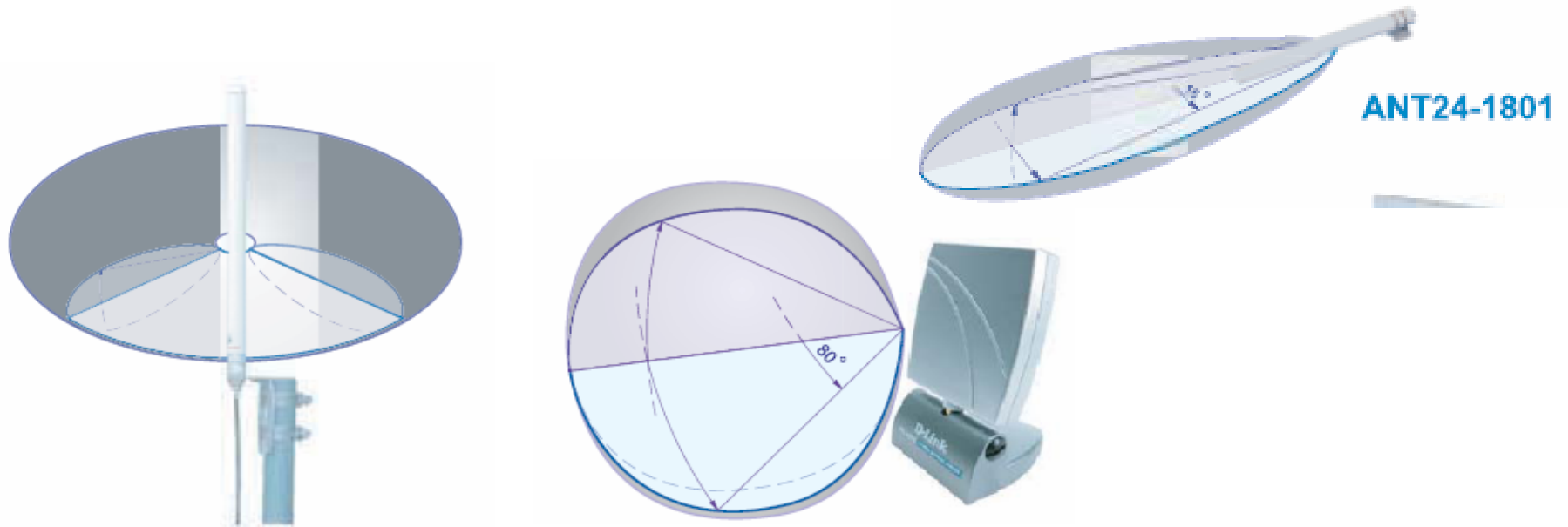
802.11b 無線網路的傳輸距離

- 無線網路使用距離與他的傳輸速率有絕對關係，
傳輸速率越大其傳輸距離就越短。

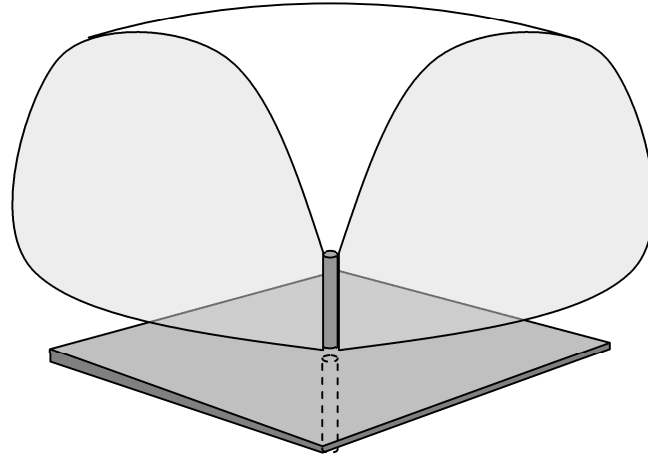


Antenna 天線種類

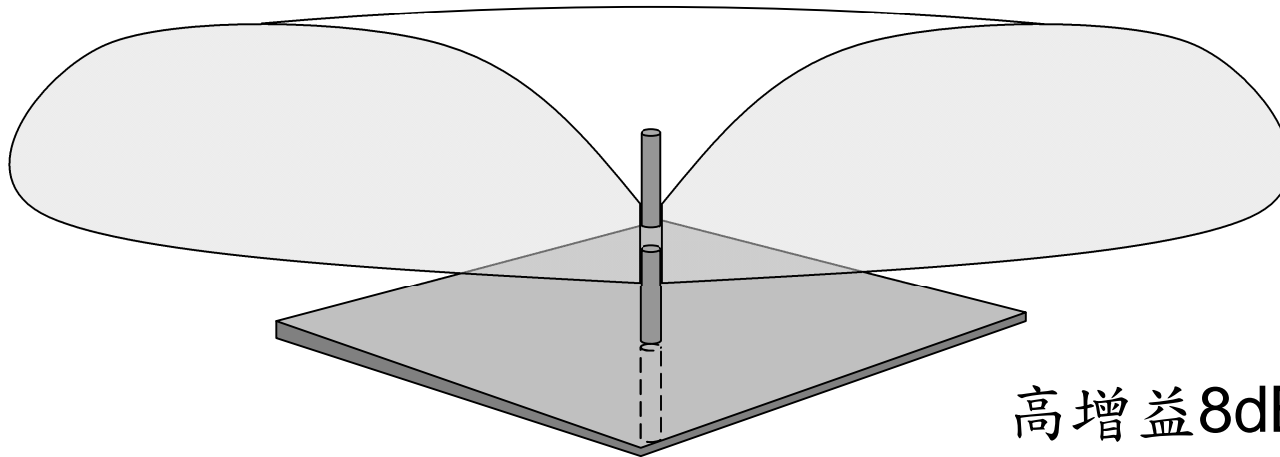
- Omni-directional antenna (全向式天線)
- Semi-directional antenna (半指向式)
- Highly-directional antenna (高指向式)



全向式天線能量放射



2dBi天線



高增益8dBi天線

無線AP-擺放方式

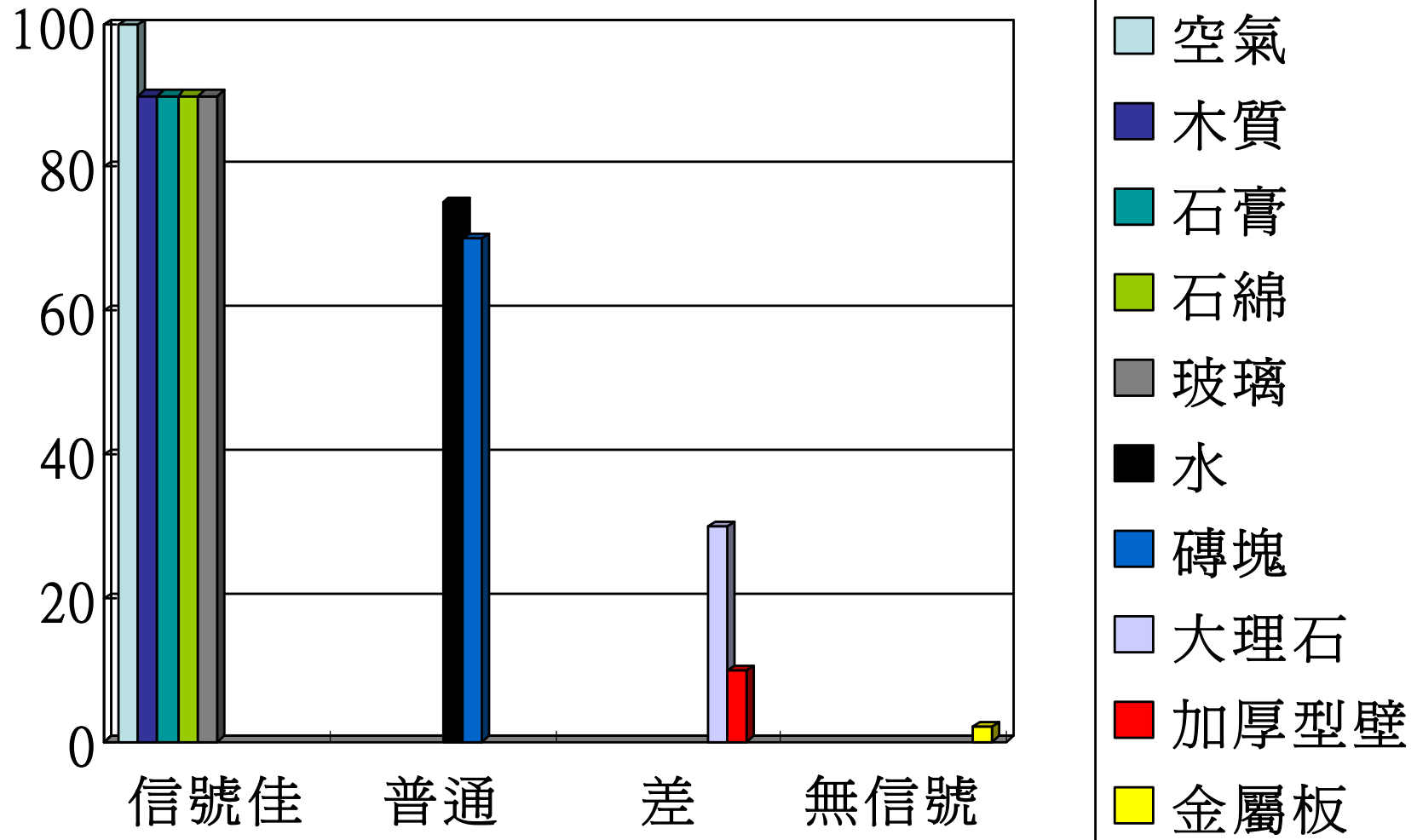


一台AP 可連接多少台PC?

■ 對無線網路而言我們以一台無線網路基地台的最多承接人數來算大約是一個基地台可承接約**10~15**台左右, 這是因為考慮到下列因素;

- **頻寬:**使用者的工作軟體在網路傳輸時一次所需的網路頻寬。
- **一台無線基地台的負荷能力與效能比。**
- **用戶工作環境。(一般用戶或多媒體用戶)**

無線網路對物質的穿透能力？



無線網路信號會不會被竊取？

- 由於目前市面上的無線網路卡大多被設計成自動搜尋頻狀態，所以有可能您家裡的無線網路基地台所發射出來的信號，會被隔壁鄰居使用而不自知，若不希望這種情況產生，可作下列設定來避免。
- 鎖住特定電腦使用無線網路卡的
 - **MAC Address**
- 啓動您的無線網路基地台及無線網路卡上的
 - **WEP**加密功能(容易遭有心人士破解)
 - **WPA-PSK/WPA2-PSK** (建議使用此種方式進行加密)

提供設備項目-無線基地台

DAP-2590 802.11a/b/g/n 無線基地台

➤ 高效能傳輸：

- 無線傳輸達300Mbps傳輸速率
- 以Gigabit介面連結有線網路提供高傳輸頻寬

➤ 高擴充性：

- 3支(2T3R)雙頻可換式天線，彈性擴充無線連線範圍
- 各校增設無線基地台中心端不需加購設備或授權

➤ 整合多元網路應用服務

- 提供8組SSID，搭配WiNOC多種認證方式與網路VLAN應用
- 依據不同應用提供頻寬與優先權設定QoS功能

➤ 穩定安全網路連線

- 完整安全加密機制(WPA2，802.1X)
- 金屬外殼，強化硬體穩定性
- Wireless Partition阻隔無線用戶相互連線

➤ 節能減碳

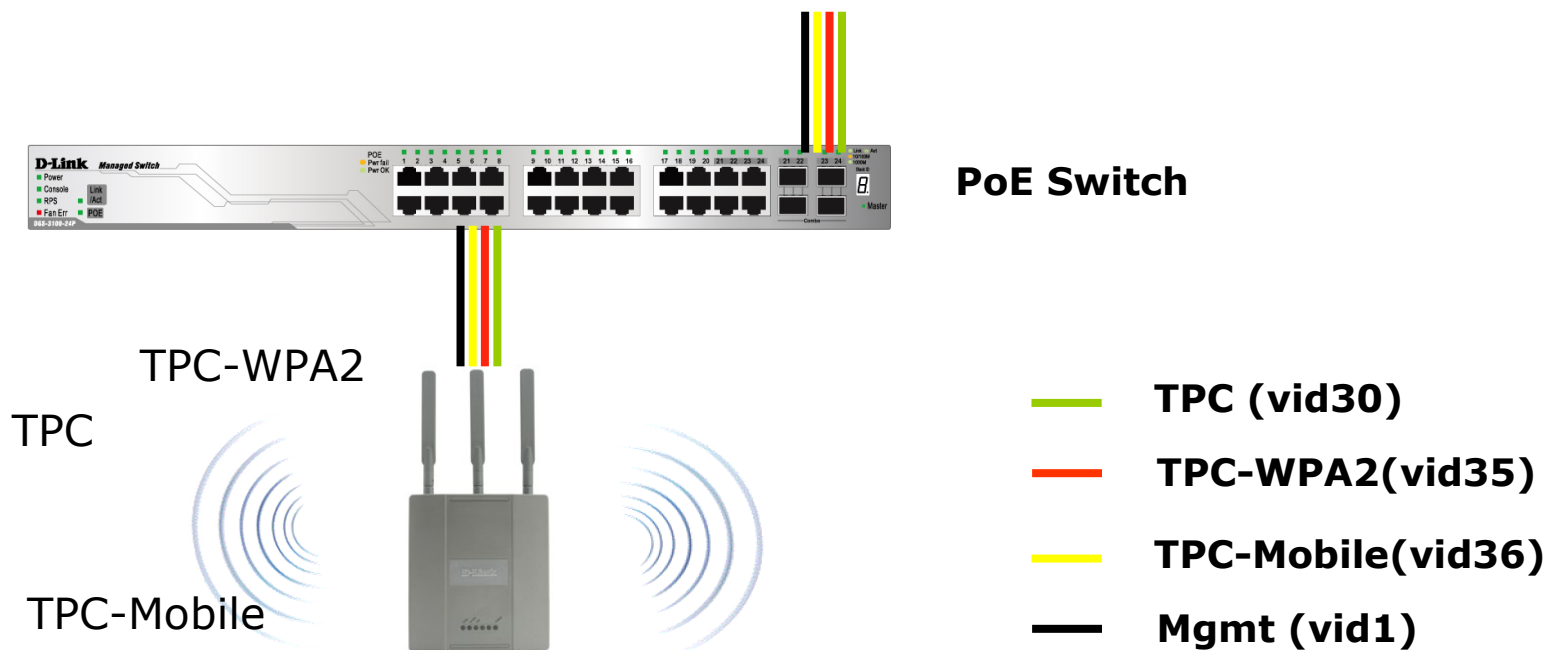
- 搭配WiNOC排程功能，集中管理電源節能省電



DAP-2590



架構應用說明—無線AP



每台DAP-2590提供三組SSID,
TPC提供**web**認證功能
TPC-WPA2提供**WPA2**認證功能
TPC-Mobile提供行動裝置**MAC**認證功能

無線AP連接注意事項

- › 由於無線DAP-2590具備三組SSID,也切割3組vlan對應,因此必須接到有規劃的DGS-3100 Switch上特定的Port,該Port接經過設定,vlan可以相互匹配,任意接線將造成不通的現象
- › 一般原則規劃DGS-3100最後面的數個Port用來連接DAP-2590

SSID狀態

DAP-2590

- Basic Settings
- Advanced Settings
- Status

Multi-SSID Settings

Enable Multi-SSID Enable Priority

Wireless Settings

Band: 2.4 GHz
Index: Primary SSID
SSID: TPC
SSID Visibility: Enable
Security: Open System
Priority: 0
WMM (Wi-Fi Multimedia): Enable

Key Settings

Encryption: Disable Enable
Key Type: HEX Key Size: 64 Bits
Key Index(1~4): 1
Network Key:
Confirm Key:

[Add](#)

Index	SSID	Band	Encryption	Delete
Primary SSID	TPC	2.4 GHz	None	
Multi-SSID1(Edit)	TPC-WPA2	2.4 GHz	WPA2-Auto-Enterprise	
Multi-SSID2(Edit)	TPC-Mobile	2.4 GHz	None	

Vlan對應

D-Link DAP-2590

Home Maintenance Configuration System Logout Help

DAP-2590
Basic Settings
Advanced Settings
Status

VLAN Settings

VLAN Status : Disable Enable

VLAN Mode : Static

VLAN List	Port List	Add/Edit VLAN	PVID Setting		
VID	VLAN Name	Untag VLAN Ports	Tag VLAN Ports	Edit	Delete
1	default		Mgmt, LAN		
30	wlan	Primary	Mgmt, LAN		
35	wpa2	S-1	Mgmt, LAN		
36	mac_auth	S-2	Mgmt, LAN		

舊有AP納入

- ▶ 學校內若已經有採購D-Link DWL-3200AP,亦想加入如DAP-2590的功能,AP設定部份可參考SOP,另外還需針對以下兩者進行調整
 - A.規劃DGS-3100特定Port設定vlan tag功能接取AP
 - B.後端認證系統需要加入此AP進行納管與WPA2認證
- ▶ 學校內的舊AP若部分功能無法達到如DAP-2590功能,但至少可支援SSID TPC的web認證方式,那麼可將AP的SSID改為TPC後,於DGS-3100上規劃特定的wlan vlan的untag Port接取PC,需特別注意AP的IP管理問題

AP失連問題

- › 由於DAP-2590規劃採用DGS-3100 PoE供電,AP若因為失連等其他原因需要重新啟動的話,無須至現場插拔線路,可針對PoE Switch特定Port開關PoE功能,讓設備重新啟動

無線網路使用者認證伺服器 DSA-3600

基礎操作及簡易故障排除

提供設備項目-無線網路使用者認證設備

DSA-3600 無線認證閘道器

➤ 高相容性

- 支援多樣性無線認證機制(POP3 、LDAP 、Radius)

➤ 提供客製化應用

- 各校獨立中文化網頁認證畫面
- 認證成功轉址機制，提升在地化網路應用
- 網頁導引使用者安裝與使用802.1x認證

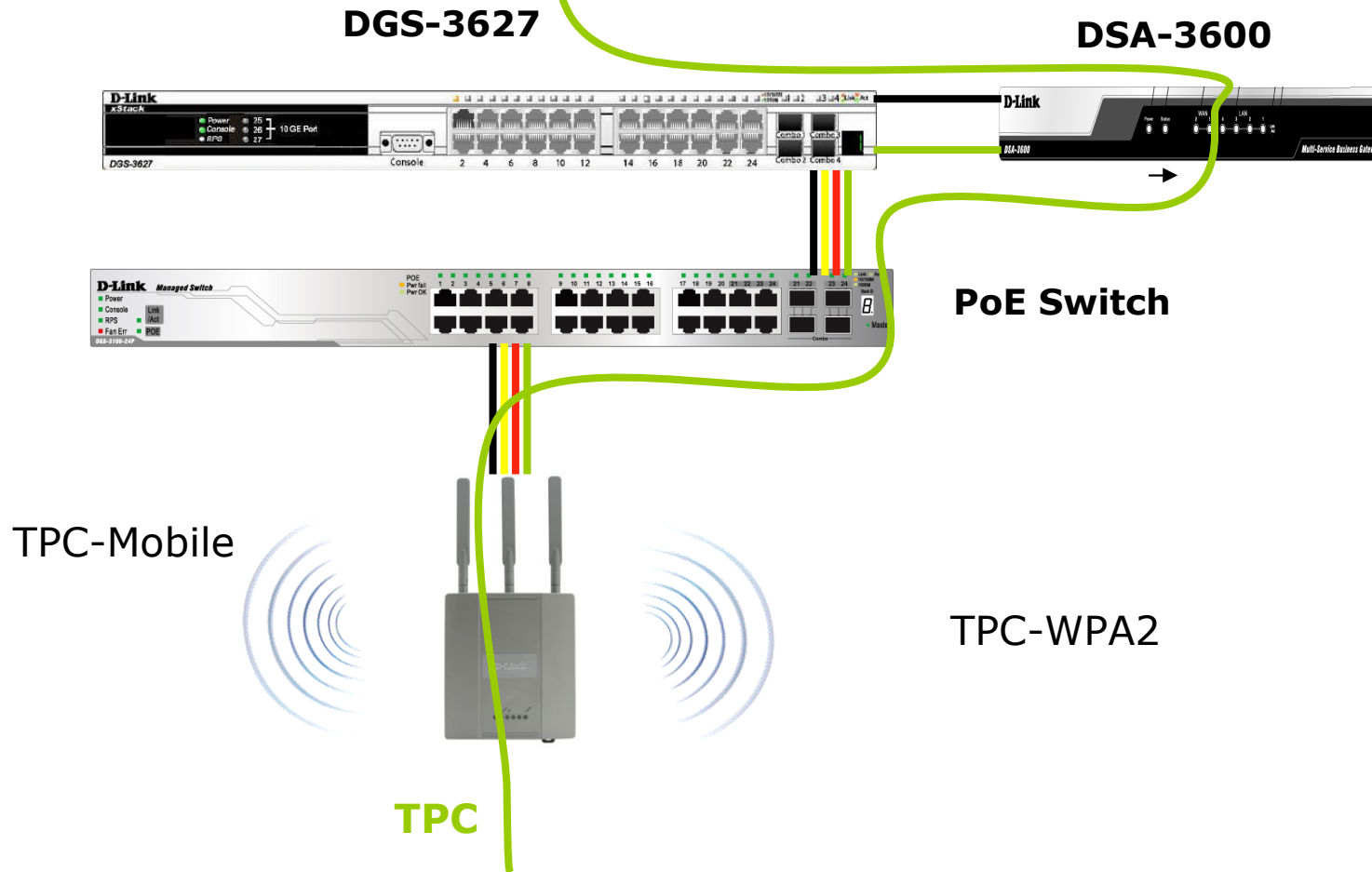
➤ 安全網路連線

- 依據認證身份分配網路權限及頻寬



DSA-3600

無線AP認證機制說明



連線TPC SSID的Traffic Flow

開啟網頁,出現認證視窗



新莊國小無線網路

歡迎使用無線網路
請輸入你的帳號密碼

使用者名稱

密碼

記住我的帳號

新莊國小 Copyright (c)

登入說明

- › 台北縣內的帳號,可直接輸入帳號或輸入帳號加上@tpc.edu.tw
- › Example
- › test
- › test@tpc.edu.tw
- › 其他縣市的使用者,請務必輸入帳號@domain資訊
- › test1@klc.edu.tw

登入成功畫面



關閉登入成功畫面處置

- › 如果不小心將登入成功畫面關閉的話,依然可以繼續使用網路,但若需要登出,請在瀏覽器上鍵入
 - › <http://logout>
 - › Or
 - › <http://1.1.1.1>
- 即可登出

由於同一個帳號僅能夠支援一個人登入,無法多人使用同一帳號登入,因此建議不小心關閉網頁後,若不使用,請手動登出

WAN IP

The screenshot displays the WAN1 Interface Setting configuration page. At the top, there are navigation tabs for System, Users, Access Points, Network, Utilities, and Status. Below these are sub-tabs for General, WAN1, WAN2, WAN Traffic, IPv6, LAN Port Mapping, Service Zones, and Port Location Mapping. The breadcrumb trail shows 'Main Menu > System > WAN1'. The main content area is titled 'WAN1 Interface Setting' and features a sidebar with 'WAN1' selected. The configuration options are as follows:

- Static (Use the following IP settings)
 - IP Address: *
 - Subnet Mask: *
 - Default Gateway: *
 - Preferred DNS Server: *
 - Alternate DNS Server:
- Dynamic (IP settings assigned automatically)
- PPPoE
- PPTP

HW Status

System Interface **HW** Routing Table Online Users Non-Login Users Session List User Logs Logs DHCP Lease E-mail & SYSLOG

[Main Menu](#) > [Status](#) > Hardware

Hardware Information	
CPU	7.92%
Memory	73.79%
Disk Usage	50.88%

線上使用者

System	Interface	HW	Routing Table	Online Users	Non-Login Users	Session List	User Logs	Logs	DHCP Lease	E-mail & SYSLOG
--------	-----------	----	---------------	--------------	-----------------	--------------	-----------	------	------------	-----------------

[Main Menu](#) > [Status](#) > Online Users

Online Users List							
No.	Username	MAC Address	Pkts In/Out	SZ / VLAN	Auth. Method	Online (Sec.)	Access From
	IP Address	IPv6 Address	Bytes In/Out	Group / Policy	Auth. Database	Idle (Sec.)	Kick Out

(Total:0) [First](#) [Prev](#) [Next](#) [Last](#)

未認證使用者

System Interface HW Routing Table Online Users **Non-Login Users** Session List User Logs Logs DHCP Lease E-mail & SYSLOG

[Main Menu](#) > [Status](#) > Non-Login Users

Non-Login Users List				
MAC Address	IP Address	VLAN ID	Service Zone	Associated AP

連線Session

[Main Menu](#) > [Status](#) > Session List

Filter					
Address Family	Protocol	Source IP	Port	Destination IP	Port
IPv4	All	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Apply Filter

Display Mode: ALL

(Total 12) [First](#) [Prev](#) [Next](#) [Last](#) Go to Page 1

Row per Page: 20

Session List							
No	Protocol	Source IP	Port	Destination IP	Port	State	Timeout
1	tcp	203.72.153.57	55075	10.254.29.1	80	ESTABLISHED	7199
2	udp	10.254.29.1	59078	203.72.153.6	53	UNREPLIED	28
3	tcp	203.72.153.57	55074	10.254.29.1	80	TIME_WAIT	69
4	tcp	60.251.77.99	443	10.252.29.64	2515	ESTABLISHED	47831
5	tcp	203.72.153.57	55072	10.254.29.1	80	TIME_WAIT	26
6	tcp	60.251.77.99	443	10.252.29.64	2531	ESTABLISHED	47838

Users log

Users Log 2010-05-10

Date	Type	Name	IP	IPv6	MAC	Pkts In	Bytes In	Pkts Out	Bytes Out
2010-05-10 16:11:22 +0800	LOGIN	L120351419@radius	10.252.29.200	N/A	00:12:79:DD:6C:CD	0	0	0	0
2010-05-10 16:29:06 +0800	Idle- Timeout	L120351419@radius	10.252.29.200	N/A	00:12:79:DD:6C:CD	4250	3238	5287153	337101

logs

[Main Menu](#) > [Status](#) > Logs

Logs

```
May 10 16:29:06 User.Kick: Idle-Timeout Username=L120351419@radius, IP=10.252.29.200, IPv6=N/A, MAC=00:12:79:DD:
May 10 16:11:23 User.Login: User login Username=L120351419@radius, IP=10.252.29.200, IPv6=N/A, MAC=00:12:79:DD:
May 7 16:05:29 User.Logout: User logout Username=F220170823@radius ,IP=10.252.29.51, IPv6=N/A ,MAC=00:23:08:B2:
May 7 15:24:47 User.Logout: User logout Username=tatung@radius ,IP=10.252.29.170, IPv6=2001:288:2319:30:84f5:ac
May 7 15:24:01 Log: [Over DNS Limit] UDP MAC=00:23:4e:31:28:1e SIP=29.36.10.252 SPort=468 DIP=3.170.163.28 DPo
May 7 15:23:43 User.Login: User login Username=tatung@radius, IP=10.252.29.170, IPv6=2001:288:2319:30:84f5:ace5:
May 7 14:16:31 User.Login: User login Username=F220170823@radius, IP=10.252.29.51, IPv6=N/A, MAC=00:23:08:B2:C/
May 6 12:21:06 User.Kick: Idle-Timeout Username=guest01@radius, IP=10.252.29.184, IPv6=N/A, MAC=00:22:FB:A1:5E:00
May 6 12:15:05 User.Kick: Idle-Timeout Username=admin@local, IP=10.252.29.64, IPv6=N/A, MAC=00:22:FB:A1:21:A0
May 6 12:04:44 User.Login: User login Username=guest01@radius, IP=10.252.29.184, IPv6=N/A, MAC=00:22:FB:A1:5E:00
May 6 12:02:38 User.Login: User login Username=admin@local, IP=10.252.29.64, IPv6=N/A, MAC=00:22:FB:A1:21:A0
May 6 12:00:02 User.Logout: User logout Username=guest01@radius ,IP=10.252.29.184, IPv6=N/A ,MAC=00:22:FB:A1:5E:00
May 6 11:58:14 User.Login: User login Username=guest01@radius, IP=10.252.29.184, IPv6=N/A, MAC=00:22:FB:A1:5E:00
May 6 11:57:42 User.Logout: User logout Username=guest01@radius ,IP=10.252.29.180, IPv6=N/A ,MAC=90:84:0D:B6:9F:B1
May 6 11:53:03 User.Login: User login Username=guest01@radius, IP=10.252.29.180, IPv6=N/A, MAC=90:84:0D:B6:9F:B1
May 6 11:51:48 User.Logout: User logout Username=guest01@radius ,IP=10.252.29.184, IPv6=N/A ,MAC=00:22:FB:A1:5E:00
May 6 11:47:08 User.Kick: Idle-Timeout Username=tatung@radius, IP=10.252.29.141, IPv6=2001:288:2319:30:2dc6:5bf:1
May 6 11:37:05 User.Kick: Idle-Timeout Username=admin@local, IP=10.252.29.64, IPv6=N/A, MAC=00:22:FB:A1:21:A0
May 6 11:36:50 User.Login: User login Username=guest01@radius, IP=10.252.29.184, IPv6=N/A, MAC=00:22:FB:A1:5E:00
May 6 11:20:16 User.Login: User login Username=tatung@radius, IP=10.252.29.141, IPv6=2001:288:2319:30:2dc6:5bf:1
```

無線網路使用者認證機制使用教學

校園網路管理平台D-Link D-View 6.0

建置教學及運用

教育訓練大綱

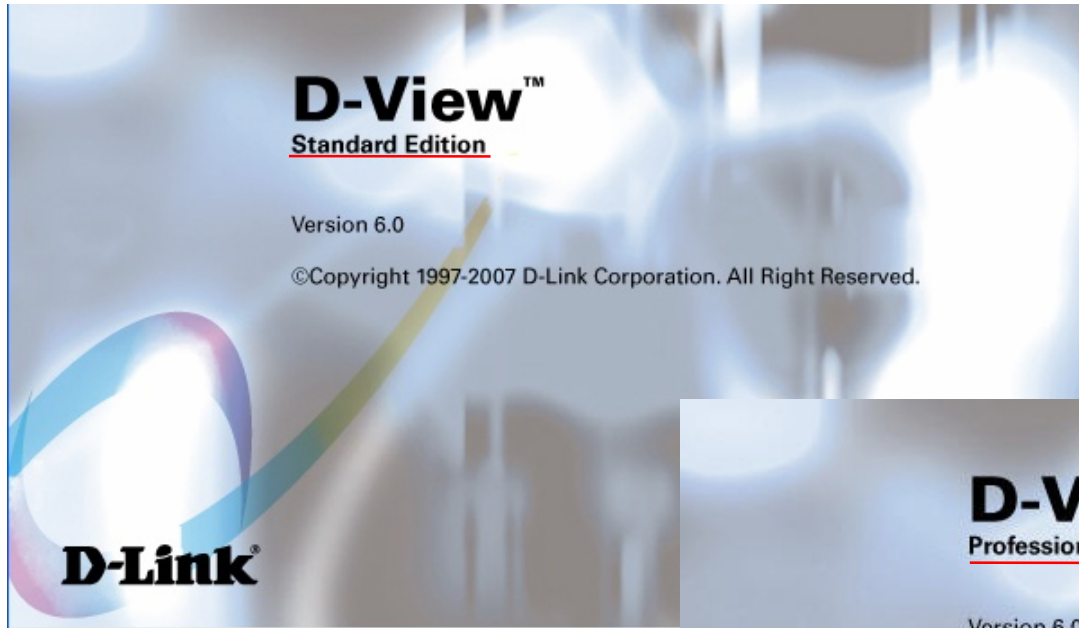
- Overview of D-View 6.0
 - 功能
- D-View 6.0 安裝
 - 硬體需求
 - 軟體需求
 - 安裝 D-View 6.0 (Standard version)
 - 使用者註冊
 - 啓用D-view
- 介紹 D-View6.0 功能
 - File Function
 - View Function

教育訓練大綱

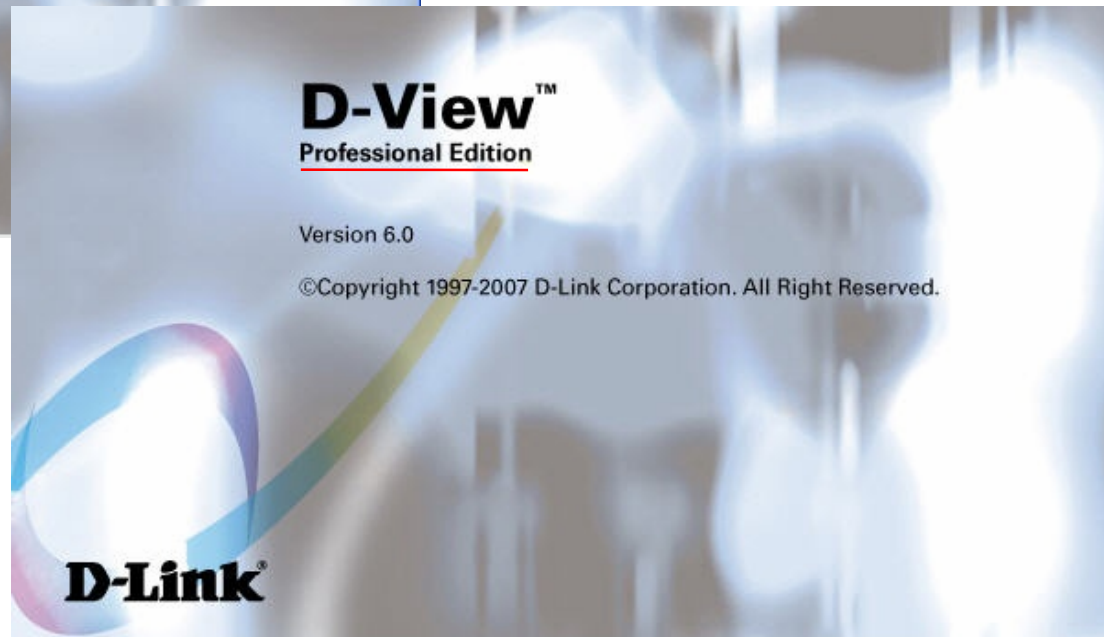
- Topology Function
- Application Function
- System Function
- Net Tools Function
- Advance Function
- D-View6 模組
- D-view存取控制權限
- Q & A

D-Link D-View6 網路管理應用程式

D-View 6.0 Overview



**Standard
Version**



Professional Version

網路管理

Configuration Management	Topology Generator / Topology Import & Export Hierarchy Topology Manager Batch Program Check for Link Capacity, Safeguard, MIB Utility / MIB Browser & Complier D-View Module Web Configuration
Fault Management	Ping Poll / Ping Poll Log SNMP Poll / SNMP Poll Log Trap Editor / Trap Log Event Config Manager Event Viewer by Netmap or by IP
Performance Management	Performance Monitor-Error Ratio, Data Distribution Port Packet Monitor- Utilization, Packet Info
Security Management	SNMP v3 Configuration NMS System Access Control NMS System Function Module Access Right Control Local and Radius Authentication Modes when Login

D-View 6.0 功能

- › Cost-effective, easy-to-use SNMP management software for management of workgroup/departmental networks
- › Topology creation program useful for network design and layout planning
- › Network topology auto-discovery via Topology Generator
- › Multiple views to view objects in Ethernet domain by “tree”
- › Batch Configuration for Firmware Upgrade, Configuration & Safeguard Engine
- › Trap and alarm notification by e-mail
- › Database supporting Microsoft SQL Server 2000/2005 and Microsoft Access formats

D-View 6.0 安裝

D-View 6.0 安裝

- › 所需的軟體為
- › a.DV-600SV01



- › b. Patch 6.00.01T18



- › 請學校端自行決定好安裝的D-view主機之後,不要任意更換主機或是更改主機IP

D-View6 Standard Version

› Hardware

- CPU: 1.4 GHz or above
- DRAM: 1 GB or above
- Hard drive available space: 200MB
- Ethernet adapter

› Software

• Operating System

- Windows XP, Windows 2000 Server or Advanced Server (English Version), Windows 2003 (English Version)
- For better UI display, it is recommended to configure the screen resolution on the management workstation at **1024 x 768**.

• DBMS

- Windows Office Access 2000 (D-View 6.0 for Access 2000)

• Microsoft Internet Explorer 6 with Service Pack 1 or later

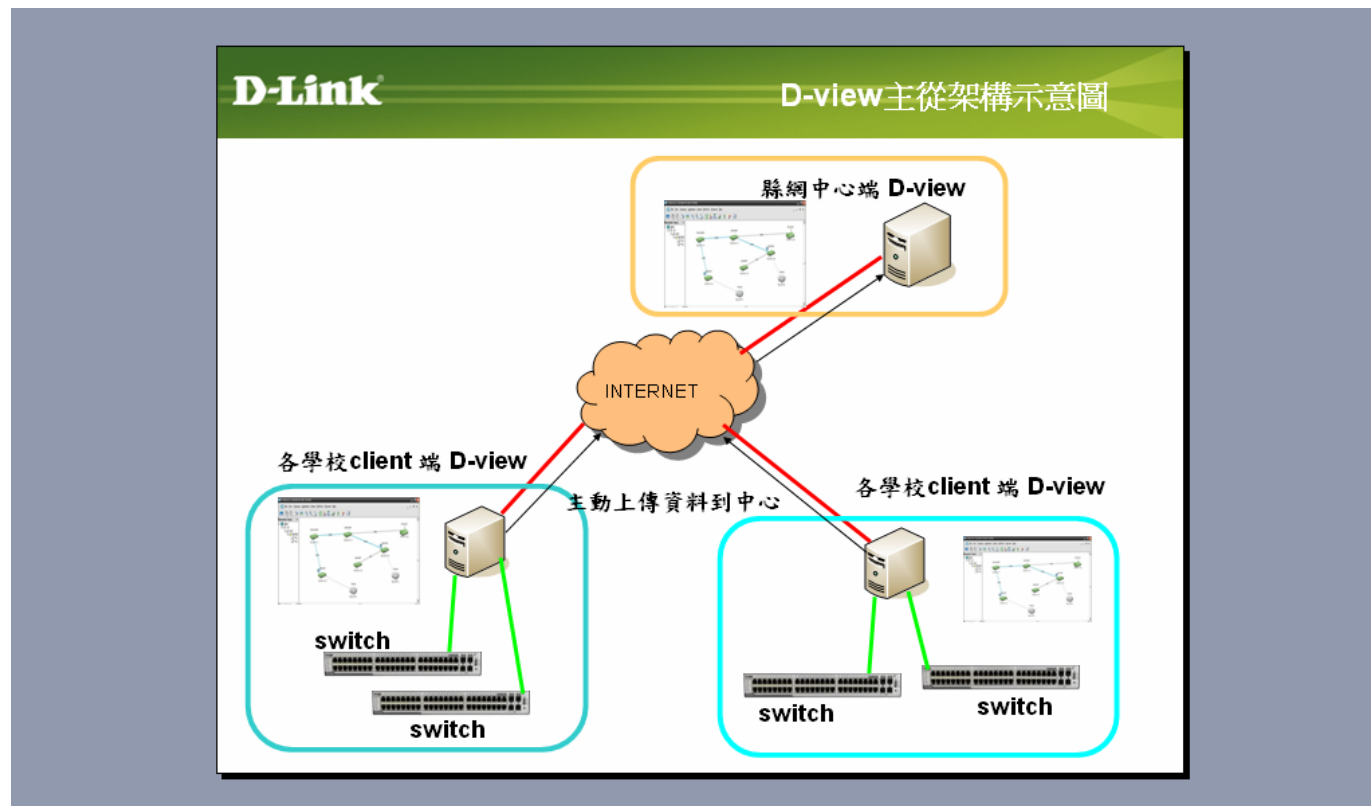
• Microsoft XML Parser and SDK, (msxml.msi)

› How to install D-View6 Standard

- Just press "Next" for several times and D-View 6.0 will be installed automatically.

D-View6 with two tier topology

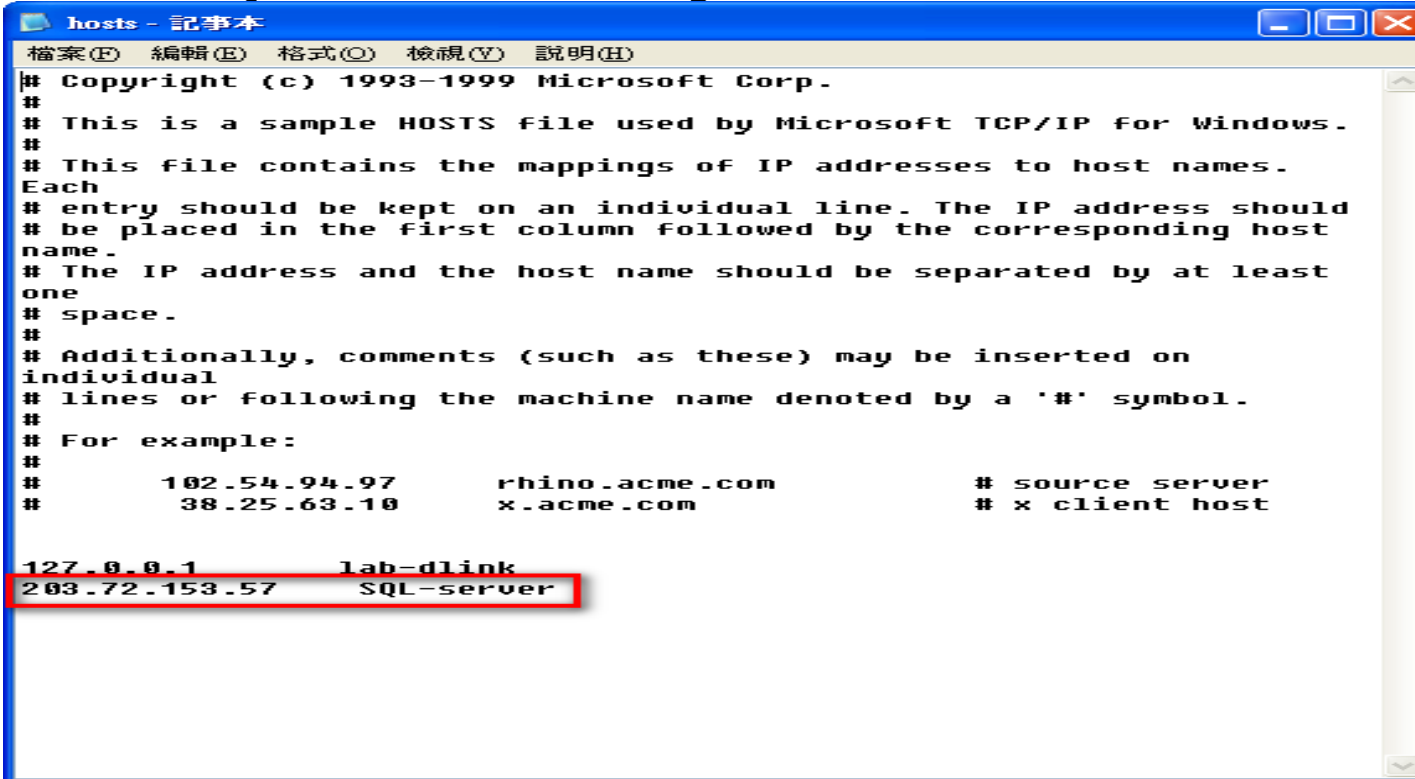
一.**D-view**分為兩個部份,一個為中心端,一個為各學校端
各學校將會透過主動傳遞**topology**的方式,把學校自己的網路拓樸圖上傳到縣網中心



D-View6 with two tier topology

› How To Install D-View6 with two tier topology:

- Step7: Configure the hosts.txt file
 - Go to C:\WINDOWS\system32\drivers\etc\hosts
 - Add a SQL-Server as following:



```
hosts - 記事本
檔案(F) 編輯(E) 格式(O) 檢視(V) 說明(H)
# Copyright (c) 1993-1999 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names.
Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host
name.
# The IP address and the host name should be separated by at least
one
# space.
#
# Additionally, comments (such as these) may be inserted on
individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com           # source server
#       38.25.63.10      x.acme.com                # x client host

127.0.0.1    lab-dlink
203.72.153.57  SQL-server
```

使用者註冊

D-view註冊流程

1. Go to <http://dview.dlink.com.tw/>
2. Register a Username/Password.
3. Enter MAC address of the host which installed D-View 6.0.
4. Get activation code.
5. One CD-Key can generates 5 activation codes.

CD-Key is not used for activate.

1.請先到D-view 網站 (http://dview.dlink.com.tw/)下註冊會員



2. 安裝前請先把安裝D-view上面的主機MAC連同序號到D-Link網站做註冊,並取得一組啟動碼

D-Link | D-View
Building Networks for People

Search | Site Map

About D-Link | Product | Support | News | My D-Link | Contact Us | Registration

Home > My D-Link > Request an Activation Code

Request an Activation Code

To activate D-View, you need an Activation Code. Complete the following registration process to request the code.

Product Information:

Device Alias:
(According to your preference, for example: D-View 6.0 Pro. or Taipei HQ)

*Purchase Date: 2010 / 4 / 12

1 XM4P8-0F04C-NL0GO-

*License Key: YD1G4-Z8040-KP9SO-

*MAC Address: -----

Distributor/ VAR:

Back Submit **2**

3

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啟用D-view

啟用 D-view

- › **At the every first time the user runs D-View 6.0, the Activation Wizard will be launched to guide the user complete the activation procedure.**
- › **Without the license activation, by default D-View 6.0 is 30-Day Trial version.**



啟用 D-view

Input Activation Key

D-View™
Version 6.0

Please provide your activation key

Register your product information and obtain the activation key. After the registration, you are about to experience the D-View 6.0 powerful features.

If you are a registered user and have the activation key, please input your key straightly and click "Activate", or please click "Register" to complete the online registration first

Activation Key :

(Format: XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX)

D-Link


啟用 D-view



使用 D-View6


如何登入D-View 6.0 網管系統

- › Launch **D-View** via double clicking the D-View icon.
- › Log on D-View NMS platform by providing the following:
- › Account: **admin**
- › Default Password: **111111**
- › Note: Modify the default password of "Admin" via the Menu Bar > System > Change Password after you log on D-View NMS platform.



Enter your account and password:

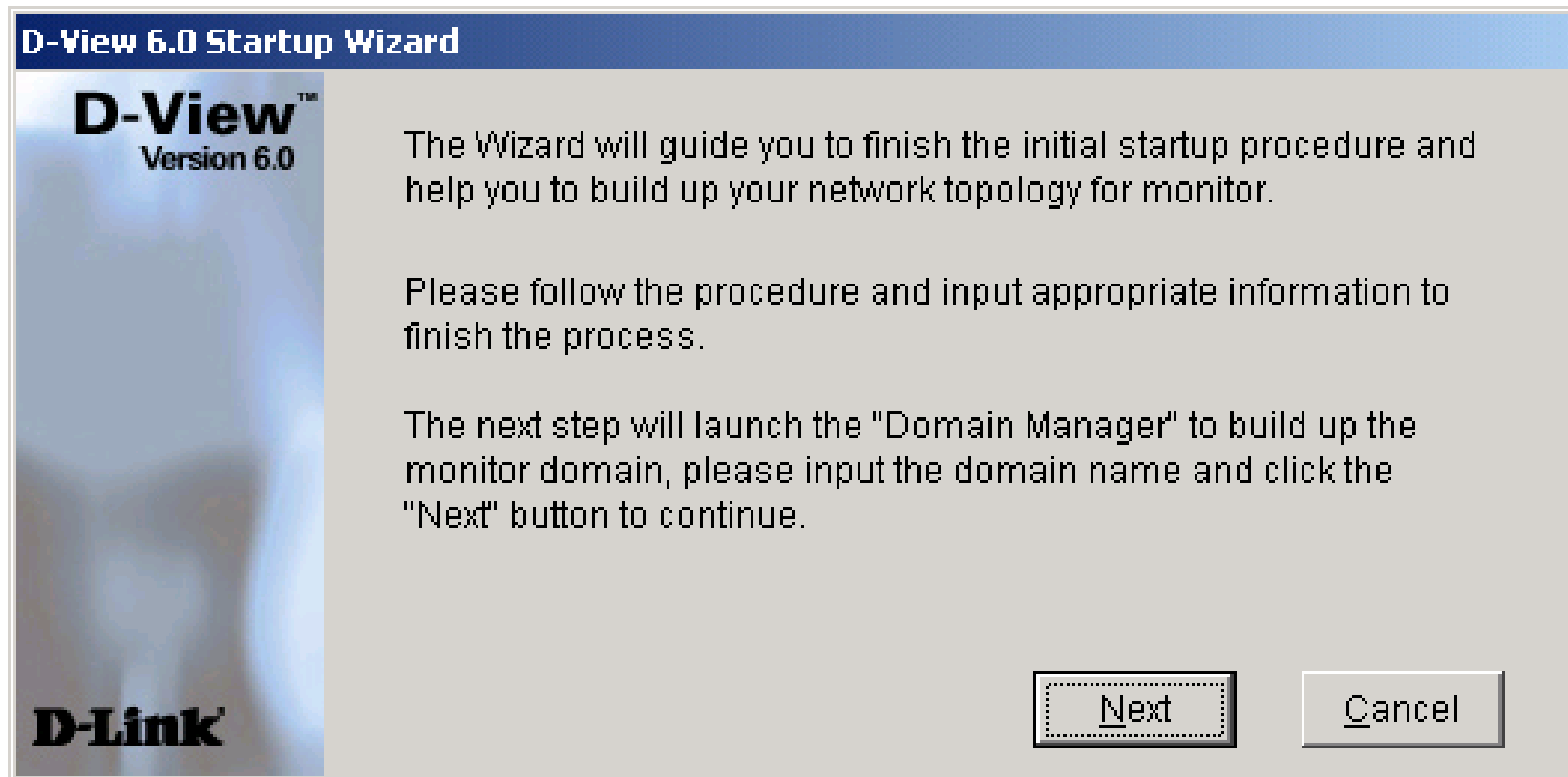
Account	<input type="text" value="admin"/>
Password	<input type="password" value="*****"/>
Managed IP	<input type="text" value="192 . 168 . 2 . 101"/>



Login Cancel Option<<

設定精靈

- › **While the user initializes D-View 6.0, the Startup Wizard will be launched to guide the service complete the initial configuration.**



如何使用設定精靈

- › **To create a Domain for management**
- › **To create a Netmap for management**
- › **To perform Topology Auto-Discovery**
- › **To export the generated topology to the NMS platform**
- › **Ready for Polling and Monitoring or any further operations**

Main Window

The screenshot displays the D-View 6.0 software interface. The main window is titled "D-View 6.0 - [DHO::Net-172.17.5.0?1701]". The interface includes a menu bar (File, View, Topology, Application, System, NetTools, Advanced, Help), a main tool bar, and a topology tool bar. A "Hierarchy Topology Workpl..." window is open on the left, showing a tree view of network elements. The main area displays a network topology diagram with various devices (GenSNMP, DGS-3460, DXS-3326 GSR) and connections. A "Message Board" is visible at the bottom, showing a table with columns for Time, Source device's interface, and Description. The table is currently empty, and the status is "ready".

Main Menu

Main Tool Bar

Topology Tool Bar

Domain

Netmaps

Message Board

Topology View Window

Time	Source device's interface	Description

ready

Hierarchy Topology Workspace

- › Root: represents the system root domain. Root Domain topology includes Domain and Netmap information.
- › Domain: in D-View 6.0, a domain is a logical domain for network management. The network endpoint information cannot be shared among domains. Double-click on a Domain to expand the domain topology.
- › Netmap: represents network segments in D-View 6.0. Double-click on a Netmap to open the map view of the netmap.

Demo

Building a topology in D-View 6.0

介紹 D-View6.0 功能

File Function

File Function

The screenshot displays the D-View 6.0 software interface. The 'File' menu is open, showing the following options: Save (Ctrl+S), Startup Wizard..., Close, Close All, Print (Ctrl+P), Preview..., Page Setup..., Lockup..., Logout admin..., and Exit. A red bracket highlights the 'Save' option. The main window shows a network topology diagram with several green switch icons (D-Link DES-3526 and DES-3528) and a blue PC icon. The diagram includes labels for ports (e.g., 100M, 100M, 100M) and IP addresses (e.g., 192.168.1.2, 192.168.1.10, 192.168.1.10-10, 192.168.1.10-10, 192.168.1.10-10, 192.168.1.10-10). The status bar at the bottom of the window displays 'Save current topology' and 'No Record in Database, can't be found Link Down'. The Windows taskbar at the bottom shows the Start button, several open applications (D-View 6.0, TeamViewer), and the system tray with the time 9:48 AM.

Save Ctrl+S Save the current topology.

Startup Wizard... The wizard guides you to create a topology.

Close Close the current Topology View window.

Close All

Print Ctrl+P Print the current topology.

Preview... Preview the current topology.

Page Setup... Set printer options, properties and paper size.

Lockup... Locks D-View.

Logout admin... Logout of D-View and sign in as a different user.

Exit Exit D-View.

View Function

View Function

The screenshot displays the D-View 6.0 interface. The main window shows a network topology diagram with the following components and connections:

- DFL-1600** (top switch) connected to **DES3526** (middle switch) via a 100M link with IP 192.168.1.1.
- DES3526** connected to **NonSNMP** (PC) via a 100M link with IP 10.3.3.1.
- DES3526** connected to **DGS3200-10** (bottom switch) via a 100M link with IP 192.168.1.2.
- DGS3200-10** connected to **DES3528** (bottom right switch) via a 100M link with IP 11.3.3.253.
- DES3528** connected to **DES3528** (bottom left switch) via a 100M link with IP 11.3.3.100.

The interface includes a menu bar (File, View, Topology, Application, System, NetTools, Advanced, Plug-In, UserMgr, Help) and a toolbar. A 'View' menu is open, showing options like DevManage Toolbar, Advanced Toolbar, Net Toolbar, System Toolbar, Application Toolbar, Topo Manager Toolbar, Main Toolbar, Status Area, Menu Bar, Hierarchy Topo Workplace, Message Board, Cascade, and Tile Vertically. A 'Hierarchy Topo Workplace' tree is visible on the left. At the bottom, a 'Message Board' table shows a log entry:

Time	Source Device IP	Description
2009-06-06 22:32:35	11.3.3.100	No Record in Database, can't be found Link Down

View Function

The screenshot displays the D-View 5.0 software interface. The 'View' menu is open, showing options for toolbars and workspace settings. The network topology diagram shows a central switch (DES3526) connected to three other devices: a NonSNMP device (10.3.3.1), a switch (DGS3200-10, 11.3.3.253), and another switch (DES3526, 11.3.3.100). The interface also includes a status bar at the bottom with a table of network events.

Time	Source Device IP	Description
2009-06-06 22:32:35	11.3.3.100	No Record in Database, can't be found Link Down

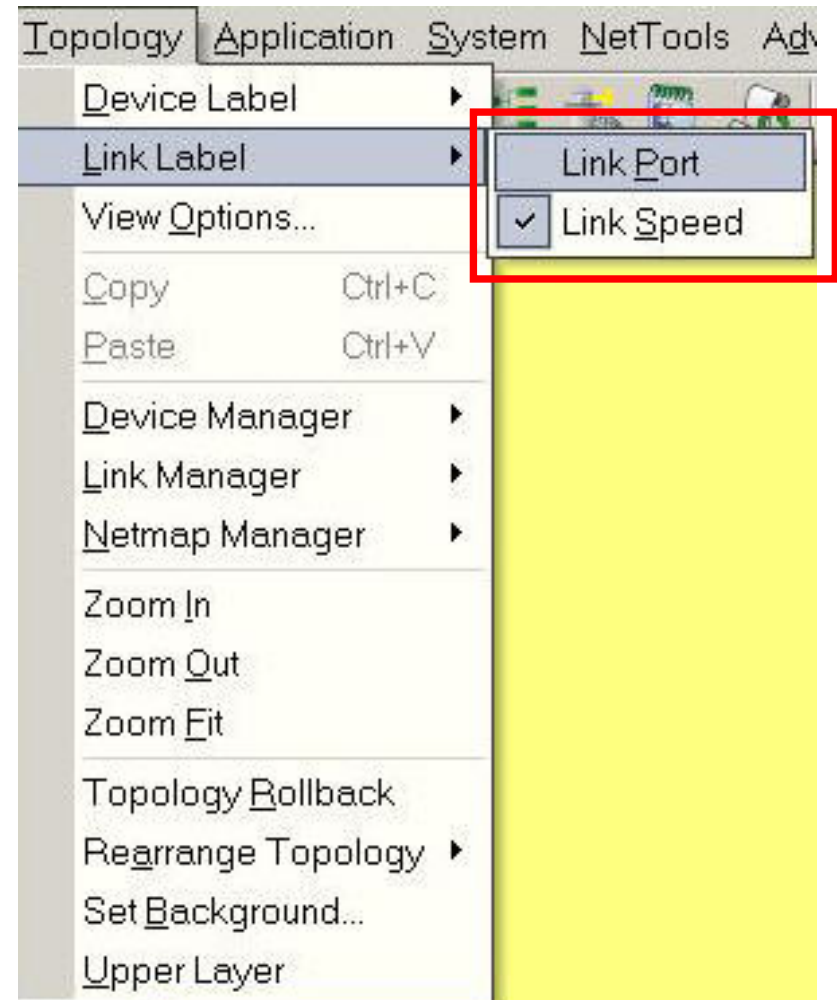
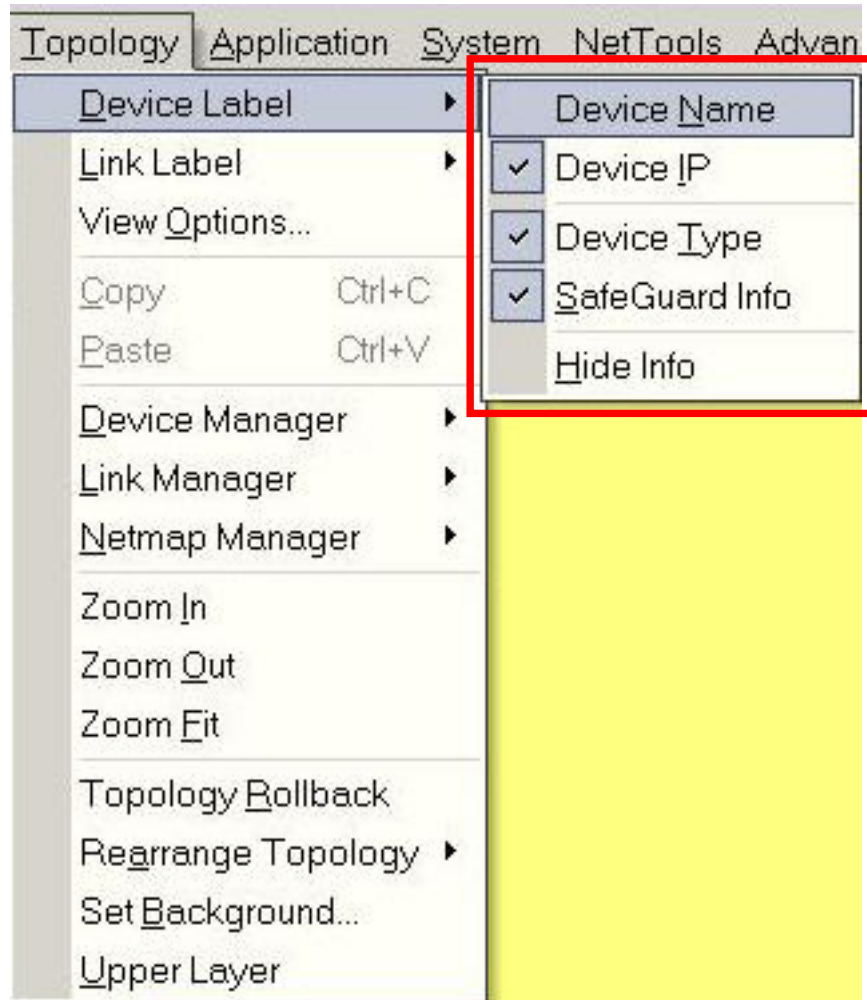
Topology Function

Topology Function

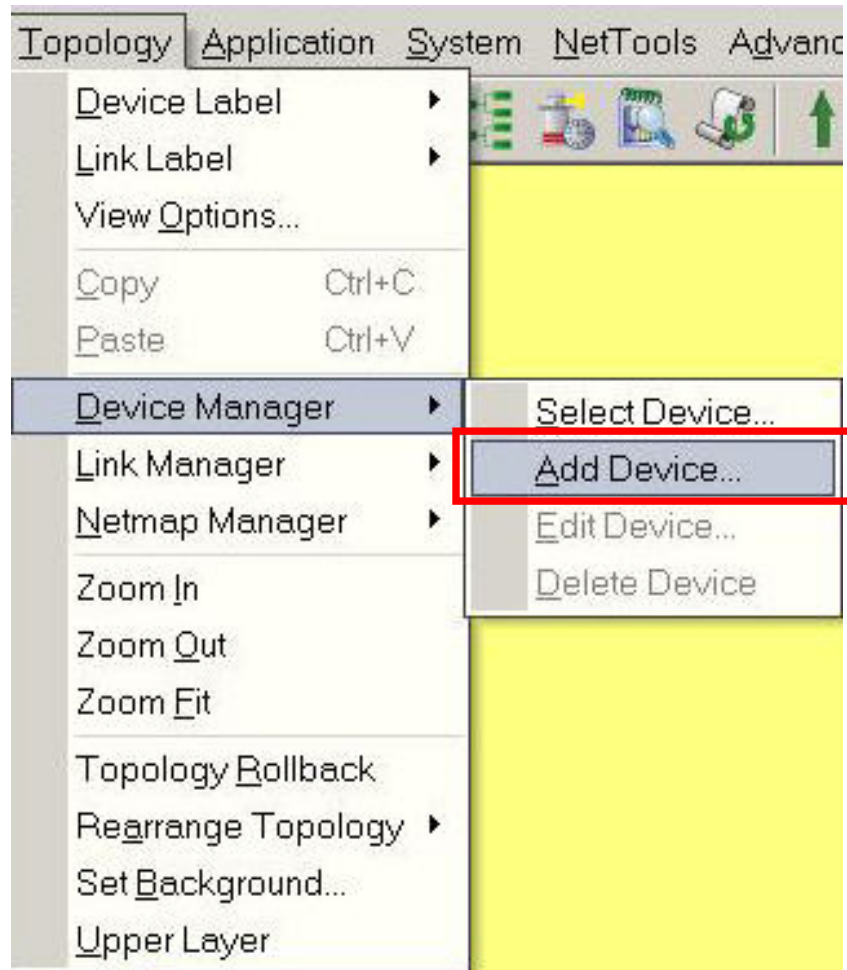
The screenshot displays the D-View 6.0 software interface. The main window shows a network topology diagram with several devices: a DFL-1600 switch at the top, a DES3526 switch in the middle, and two DGS3200-10 switches at the bottom. A laptop labeled 'NetMap' is connected to the DES3526 switch. The diagram includes IP addresses (192.168.1.1, 192.168.1.2, 11.3.3.253, 11.3.3.100) and link speeds (100M). A menu is open on the left side, listing various functions. A red box highlights the first three items in the menu: 'Device Label', 'Link Label', and 'View Options...'. The corresponding descriptions for these items are listed to the right of the menu.

Menu Item	Description
Device Label	Display Device Information.
Link Label	Display link port or speed.
View Options...	Display View Options.
Copy (Ctrl+C)	
Paste (Ctrl+V)	
Device Manager	Select or Add A Device.
Link Manager	Select or Add A Link.
Netmap Manager	Select or Add A Netmap.
Zoom In	Zoom In your topology.
Zoom Out	Zoom Out your topology.
Zoom Fit	Auto adjust your topology.
Topology Rollback	Recover In your topology.
Rearrange Topology	
Set Background...	Set your topology Background Color.
Upper Layer	

Topology Function



Topology Function – Device Manager



The 'Add Device' dialog box is shown with the following sections:

- Basic Information:** Name: DES-3528, Vendor: D-Link, Type: DES3528.
- Interface Configuration:** A table with columns 'Interface IP' and 'Type'. The first row contains '11.3.3.100' and 'Ethernet'. Buttons for 'Add...', 'Edit...', and 'Delete' are on the right.
- Detailed Information:** Location: (empty), Buyer: (empty), Buy Date: 6/ 8/2009, Modules: 0, Port Num: 0, Serial No: (empty), Firmware: (empty), Note 1: (empty), Note 2: (empty).
- Management Method:** SNMP v1/v2c, with a 'Config...' button.

Buttons for 'OK' and 'Cancel' are at the bottom.

Topology Function – Device Manager

The screenshot shows the D-View 6.0 software interface. The 'Polling Config' dialog box is open, displaying a table of devices. The device 'DES-3528' with IP '11.3.3.100' is selected. A red box highlights the 'Delete' button at the bottom of the dialog. A red arrow points from the selected row to the 'Delete' button. Another red box highlights a device icon labeled 'DES3528' with IP '11.3.3.100' on the right side of the main window, with a red arrow pointing to it from the text 'New Device'.

IP	Device Name	Device Type	Protocol
<input type="checkbox"/> 10.3.3.1	Dview-6	NonSNMPDevice	ICMP
<input type="checkbox"/> 192.168.1.1	DFL-1600	DFL1600	SNMP
<input type="checkbox"/> 192.168.1.2	DES-3526	DES3526	SNMP
<input type="checkbox"/> 11.3.3.10	DES-3528	DES3528	SNMP
<input checked="" type="checkbox"/> 11.3.3.100	DES-3528	DES3528	ICMP

Topology Function – Device Manager

The screenshot displays the D-View 6.0 interface with the 'Polling Config' dialog box open. The dialog is used to configure polling for a device. The 'Select Poll Device' button is highlighted in red. The 'Poll Protocol' is set to 'SNMP'. The 'Device List' table shows a selected device 'DES-3528' with IP '11.3.3.100'. The 'Add to Poll' button is highlighted in red. A smaller 'Polling Config' dialog box is also shown, indicating 'Config polling successfully.' with an 'OK' button highlighted in red.

Device Name	Device Type	IP	pub
DES-3528	DES3528	11.3.3.100	pub

Demo

Use DEVICE_MANAGER To Add Device

System Function

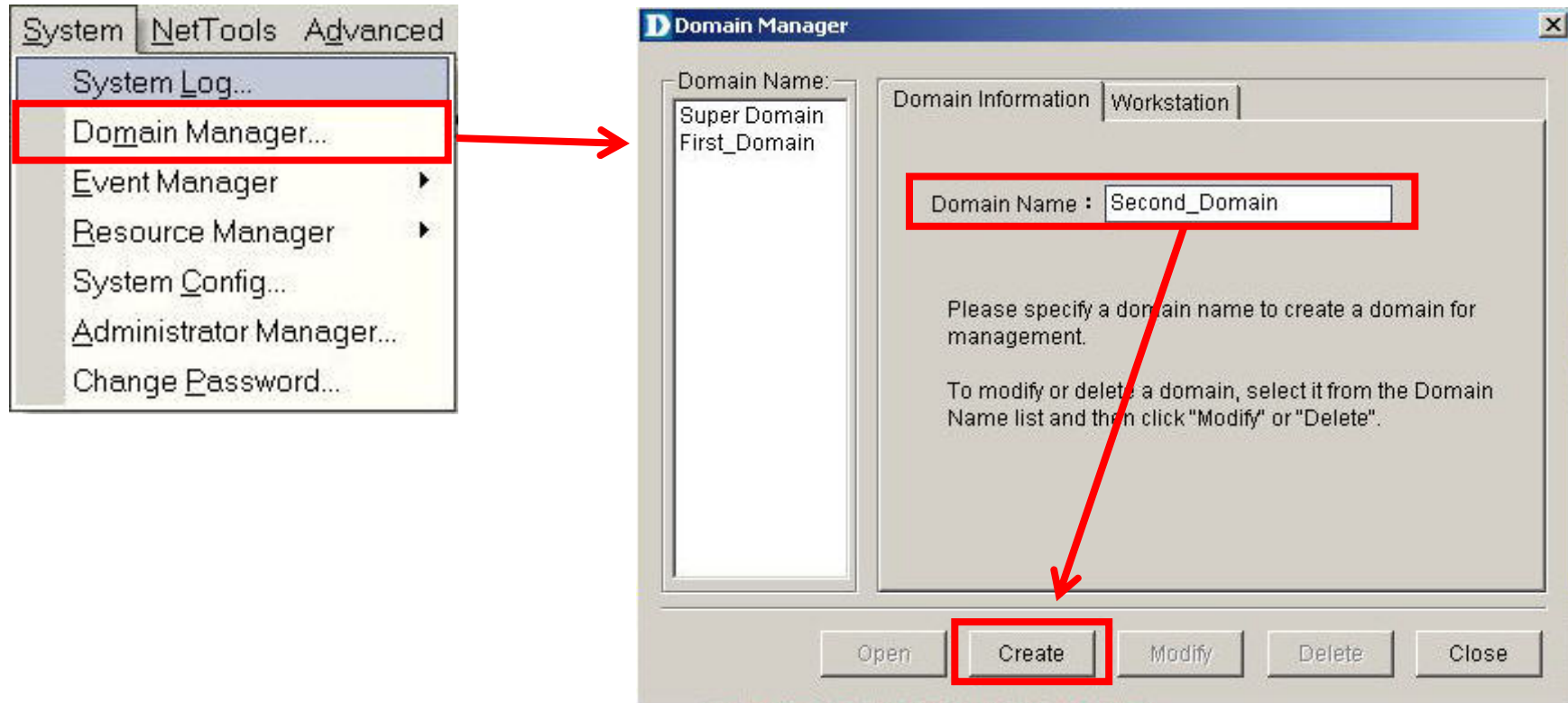
System Function

The screenshot displays the NetTools Advanced application interface. On the left, a menu is open under the 'System' tab, listing options: System Log..., Domain Manager..., Event Manager, Resource Manager, System Config..., Administrator Manager..., and Change Password... A red box highlights the 'System Log...' option. The main window shows a network diagram with a central router (DfL-1600) connected to three devices: a NonSNMP PC (10.3.3.1), a DGS3200-10 switch (11.3.3.253), and a DES3528 switch (11.3.3.100). The IP addresses 192.168.1.1 and 192.168.10.1 are also visible on the router. Below the diagram is a table with columns for Time, Source Device IP, and Description. The table contains one entry: 2009-06-06 22:32:35, 11.3.3.100, No Record in Database, can't be found Link Down. A 'Message Board' section at the bottom left contains the text: 'Retrieve logged events such as updates or error messages'. The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 9:50 AM.

System Function

- Store logged events.
- Manage domain information.
- Monitor and manage events.
- Locate devices using IP or MAC address.
- Configure the root domain name, management and authentication.
- Create user groups and provide access rights for an administrator.
- Change password after login.

System Function – Domain Manager



System Function – Event Viewer

The screenshot displays the D-Link Event Viewer application. On the left, a navigation menu includes 'System Log...', 'Domain Manag...', 'Event Manager', 'Resource Manag...', 'System Config...', 'Administrator M...', and 'Change Passw...'. The main window shows a tree view with 'First_Domain' and 'First_Netmap' selected. Below this is a table of events with columns for Type, Severity, Time, IP, Description, and Count. A 'Filter Setting' section at the bottom allows filtering by Event Type, Severity, Device (Vendor, Type, Device), Time (All, Period), and Event Source (Database, File). At the bottom, there are buttons for 'Query', 'Statistics', 'Print', 'Clear', 'Save', and 'Close', along with a 'Count: 73' indicator.

Type	Severity	Time	IP	Description	Count
7	Alarm	2009-06-09 17:27:54	11.3.3.100	Link Up	11
6	Alarm	2009-06-09 15:59:43	11.3.3.100	Link Down	4
2	Informational	2009-06-09 12:09:28	11.3.3.100	Down -> Up	6
1	Critical	2009-06-09 11:46:32	11.3.3.100	Up -> Down	7
5	Alarm	2009-06-09 11:45:21	11.3.3.100	Warm Start	3
7	Alarm	2009-06-09 11:45:02	11.3.3.253	Link Up	12
6	Alarm	2009-06-09 11:44:43	11.3.3.253	Link Down	12
6	Alarm	2009-06-09 10:52:41	192.168.1.2	Link Down	8
7	Alarm	2009-06-09 10:51:20	192.168.1.2	Link Up	8
2	Informational	2009-06-08 10:16:00	192.168.1.2	Down -> Up	1
1	Critical	2009-06-08 10:15:48	192.168.1.2	Up -> Down	1

Filter Setting

Event

Type: All Event Type

Severity: All Severity

Device

Vendor: All Vendors

Type: All Device Type

Device: All device

Time

All

Period From: 6/ 9/2009 To: 6/ 9/2009

Event Source

Database

File

Count: 73

Query Statistics Print Clear Save Close

System Function – Event Viewer

The screenshot displays the 'Event Viewer' window with a menu on the left and a main table of events. The 'Event Manager' menu item is highlighted. The table lists events with columns for Type, Severity, Time, IP, Description, and Count. A red box highlights the 'Device IP' field in the filter settings, which is set to '11.3.3.253'.

Type	Severity	Time	IP	Description	Count
2	Informational	2009-06-10 17:42:44	11.3.3.253	Down -> Up	1
1	Critical	2009-06-10 17:42:39	11.3.3.253	Up -> Down	1
7	Alarm	2009-06-09 11:45:02	11.3.3.253	Link Up	12
6	Alarm	2009-06-09 11:44:43	11.3.3.253	Link Down	12

Filter Setting

Event

Type: All Event Type

Severity: All Severity

Device

Device IP: 11 . 3 . 3 . 253

Time

All

Period: From: 6/11/2009 To: 6/11/2009

Event Source

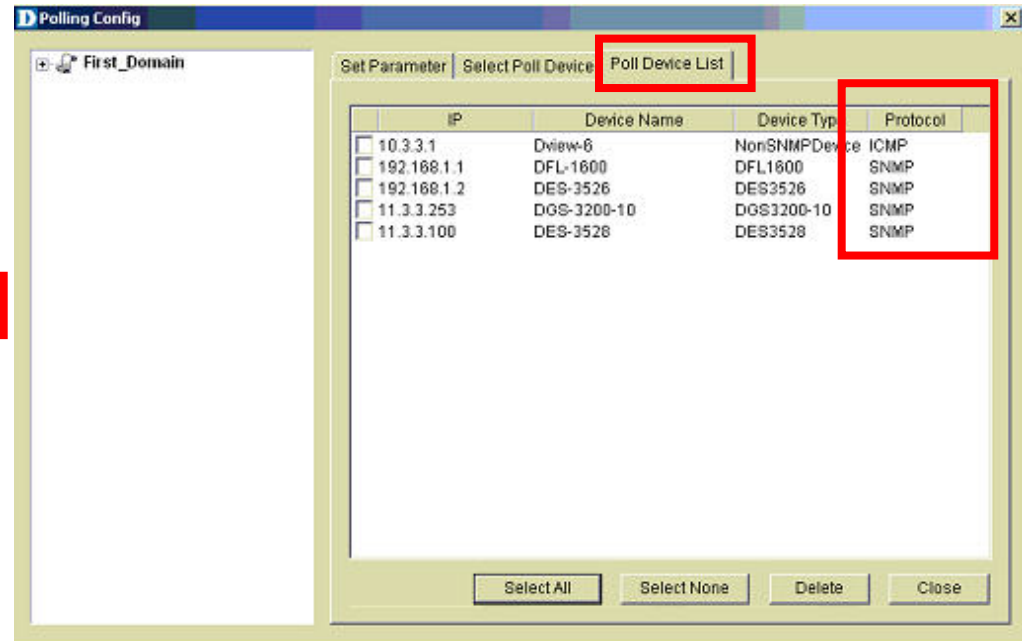
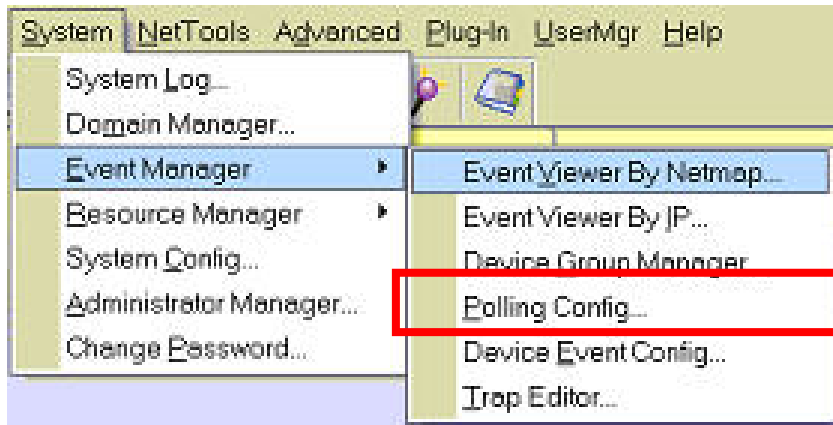
Database

File: [Browse...]

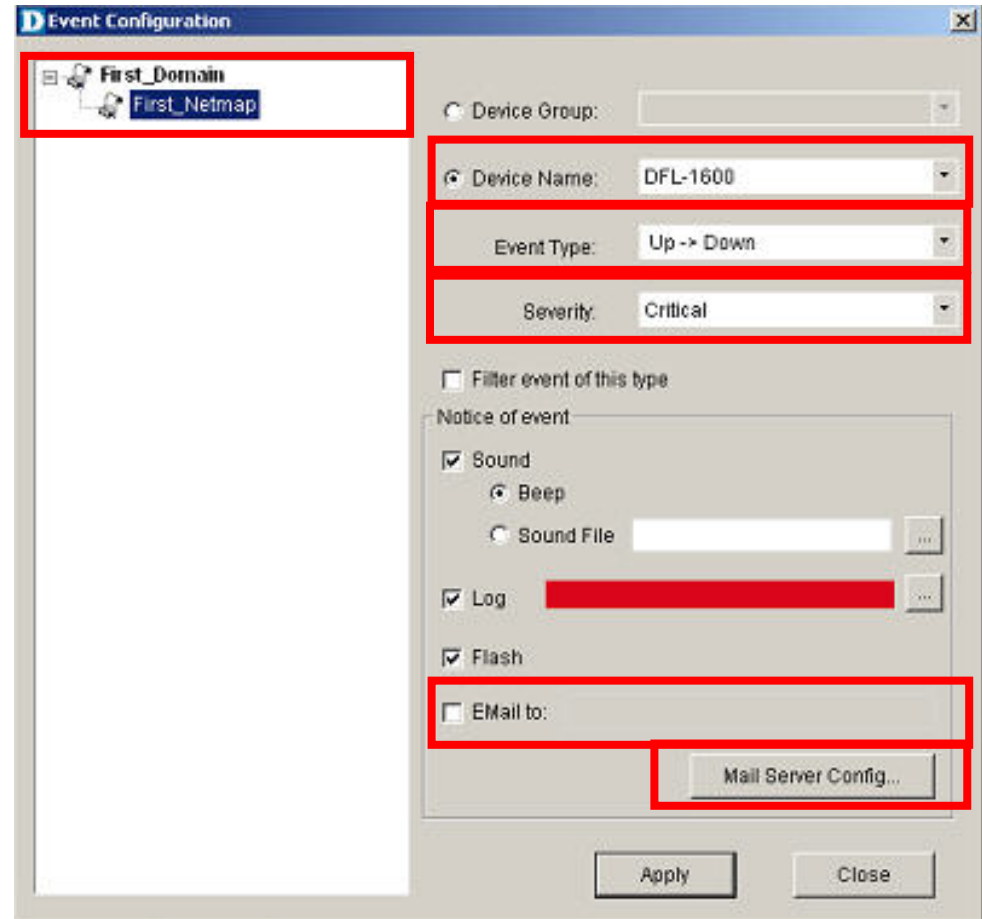
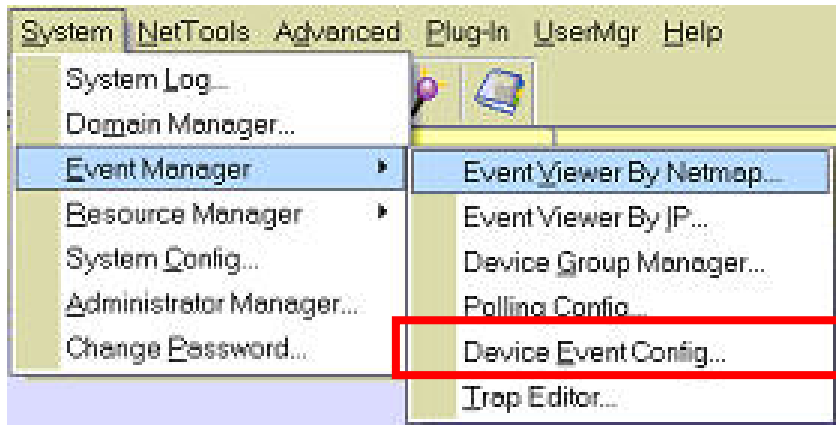
Count: 26

Buttons: Query, Statistics, Print, Save, Close

System Function – Polling Config



System Function – Device Event Config



System Function – Device Event Config

Email Configuration [X]

Sender

Name:

Email:

Authority:

Account:

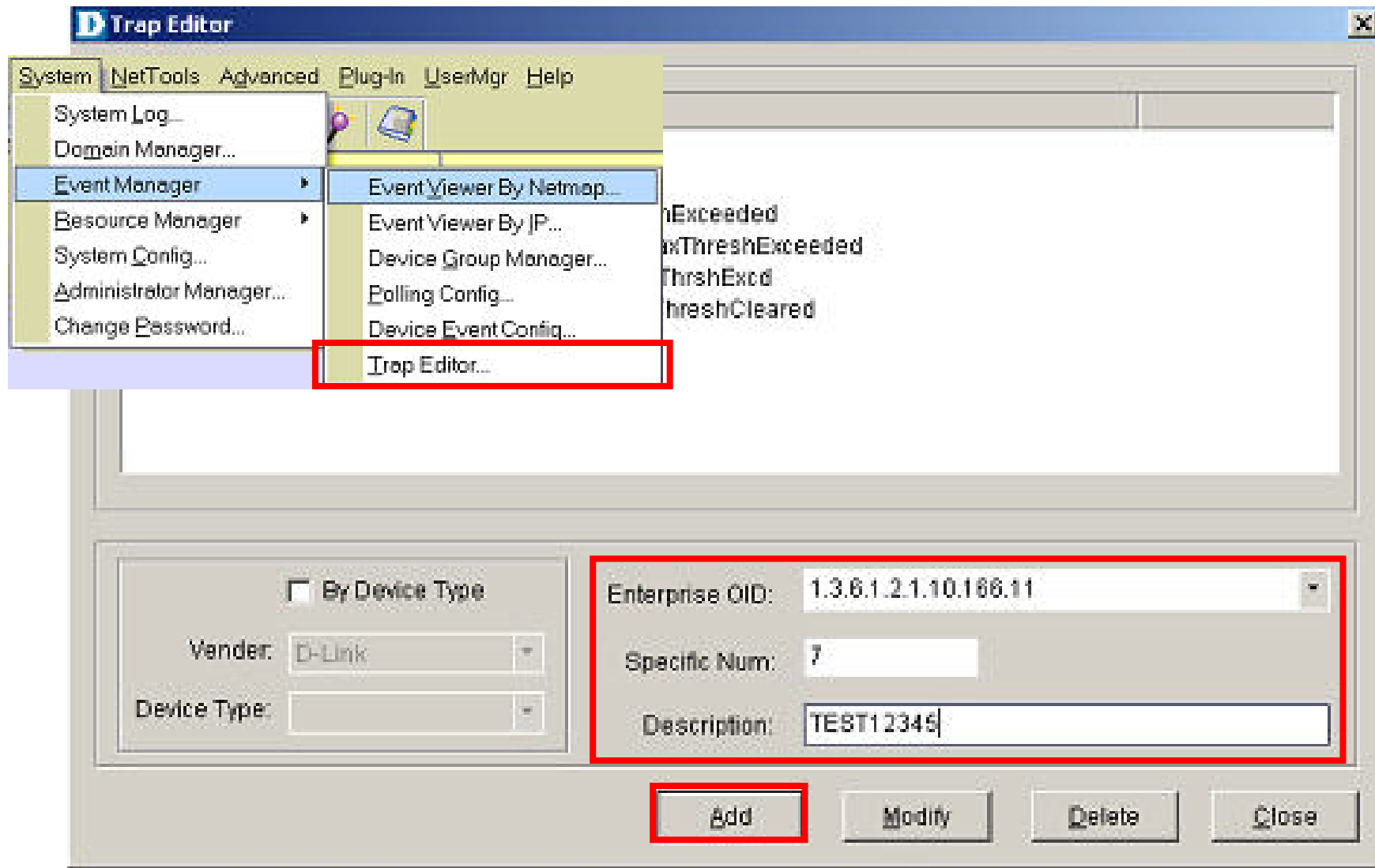
Password:

SMTP Server

SMTP Server:

SMTP Port:

System Function – Trap Editor



System Function – Trap Editor

The screenshot shows the 'Trap Editor' window with a 'Trap List' table and configuration fields. The table lists traps with their specific numbers and descriptions. The 7th trap, 'TEST12345', is highlighted with a red box. Below the table, there are fields for 'Enterprise OID', 'Specific Num', and 'Description', all of which are populated with values corresponding to the selected trap. At the bottom, there are buttons for 'Add', 'Modify', 'Delete', and 'Close', with 'Modify' and 'Delete' also highlighted with red boxes.

Specific Num	Description
1	mplsL3VpnVrfUp
2	mplsL3VpnVrfDown
3	mplsL3VpnVrfRouteMidThreshExceeded
4	mplsL3VpnVrfNumVrfRouteMaxThreshExceeded
5	mplsL3VpnNumVrfSecIllgILblThreshExcd
6	mplsL3VpnNumVrfRouteMaxThreshCleared
7	TEST12345

By Device Type

Enterprise OID: 1.3.6.1.2.1.10.168.11

Vendor: D-Link

Device Type:

Specific Num: 7

Description: TEST12345

Buttons: Add, Modify, Delete, Close

Demo

Use Event_Viewer To Check Events

Net Tools Function

NetTools Function

The screenshot shows the NetTools software interface. A menu is open, listing several functions: Device Discovery..., Trace Route..., IFTP..., Net Toolbox..., Port Packet Monitor..., Performance Monitor..., MIB Tools, and Topology Generator. A red box highlights the 'Device Discovery...' option. Below the menu, a network diagram is visible, showing a central router (DGL-1600) connected to several switches (DES-3528) and a server (10.3.3.1). The interface also displays a 'Message Board' at the bottom with a table of network events.

Time	Source Device IP	Description
2009-06-11 14:07:36	192.168.1.2	First_Domain:First_Netmap DES-3528 Link Down
2009-06-11 14:07:42	192.168.1.2	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 14:07:45	11.3.3.253	First_Domain:First_Netmap DGS-3200-10 Up -> Down
2009-06-11 14:08:00	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 14:08:00	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Down
2009-06-11 14:08:01	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 14:08:01	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Down
2009-06-11 14:08:23	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up

Search devices using IP address.

Lists all the intermediate routers a connection must pass through its destination.

Upload/Download/Update configuration files to and from devices.

Manage devices through Telnet, Web and Ping using the IP address.

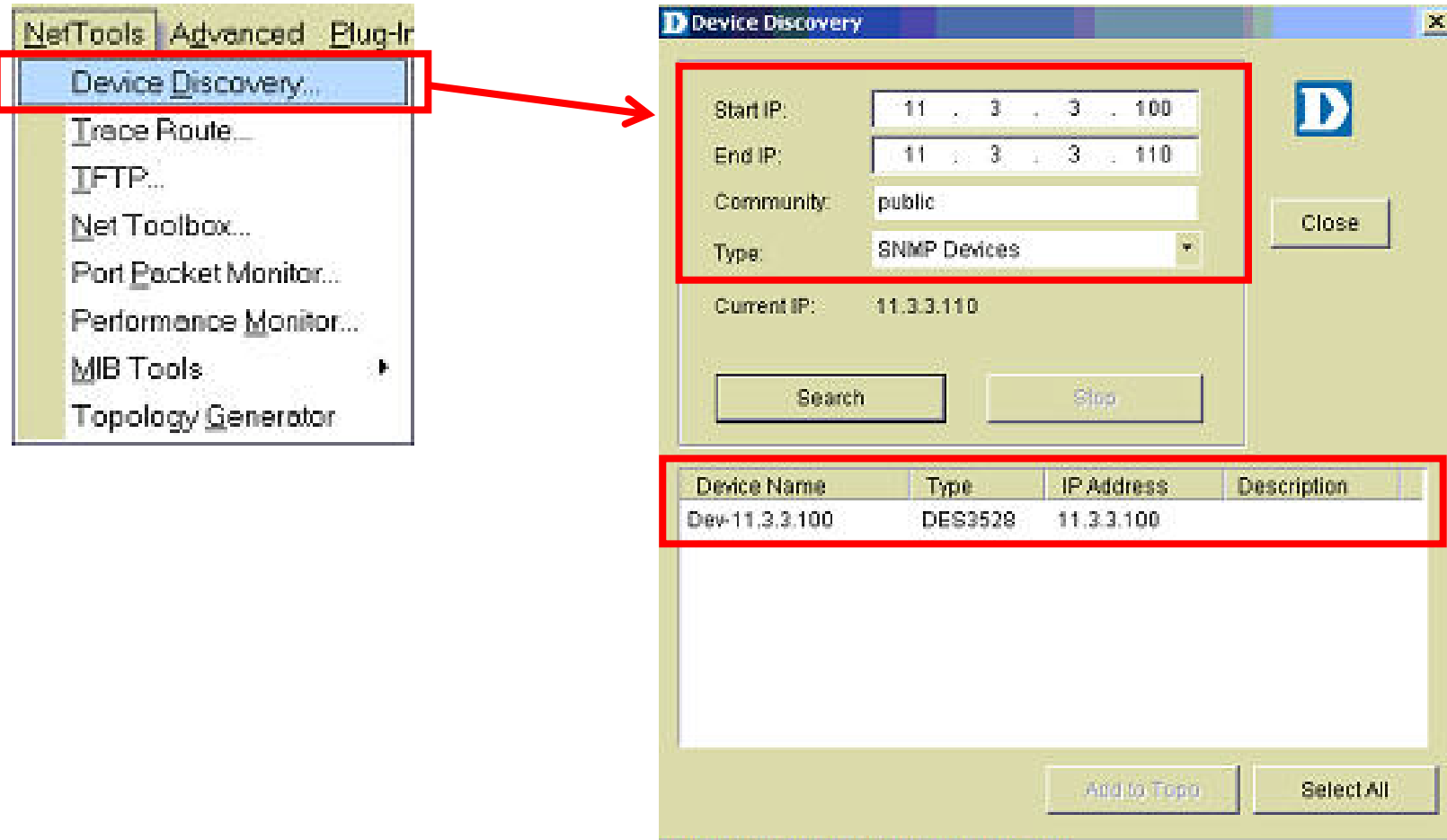
Monitor the port packet performance.

Monitor the RMON performance of a device.

Manage and configure non D-Link devices.

Tool to generate a Topology.

NetTools Function – Device Discovery



The image shows the NetTools interface with the 'Device Discovery' menu item highlighted in a red box. A red arrow points from this menu item to the 'Device Discovery' dialog box. The dialog box contains the following fields and controls:

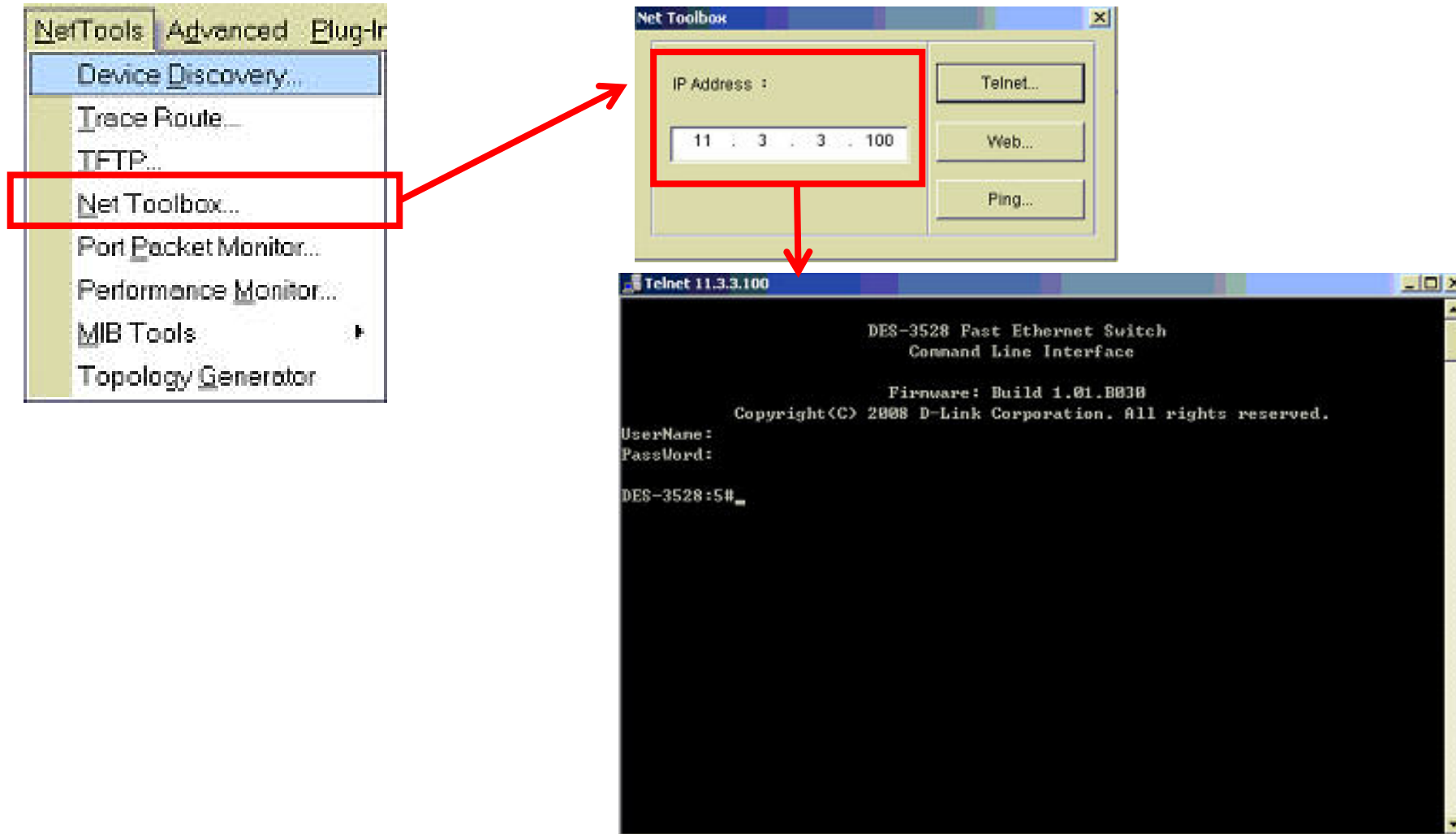
- Start IP: 11 . 3 . 3 . 100
- End IP: 11 . 3 . 3 . 110
- Community: public
- Type: SNMP Devices
- Current IP: 11.3.3.110
- Buttons: Search, Stop, Close

Below the input fields is a table with the following data:

Device Name	Type	IP Address	Description
Dev-11.3.3.100	DES9528	11.3.3.100	

At the bottom of the dialog box are two buttons: 'Add to Topo' and 'Select All'.

NetTools Function – Net Toolbox



NetTools Function – Port Packet Monitor

The image shows the NetTools software interface. On the left, a menu is open with 'Port Packet Monitor...' highlighted by a red box and an arrow pointing to the main window. The main window, titled 'Port Packet Monitor - [Packet Info]', displays a table of network ports and a line chart for port 24.

Port Index	InUcastPkts	InNUcastPkts	InDiscards	InErrors	InUnknownProts	OutUcastPkts	OutNUcastPkts
24	2	2	2	2	2	2	2

The line chart shows a fluctuating signal over time, with a peak around 16:15:50. The Y-axis ranges from -10 to 100. The X-axis shows time intervals from 16:10:50 to 16:15:50.

Below the chart, a 'Statistic' section provides the following data:

Statistic	Value
Max Value:	92
Min Value:	0
Ave Value:	46
Max Value X:	16:15:30
Min Value X:	15:57:05

NetTools Function – Performance Monitor

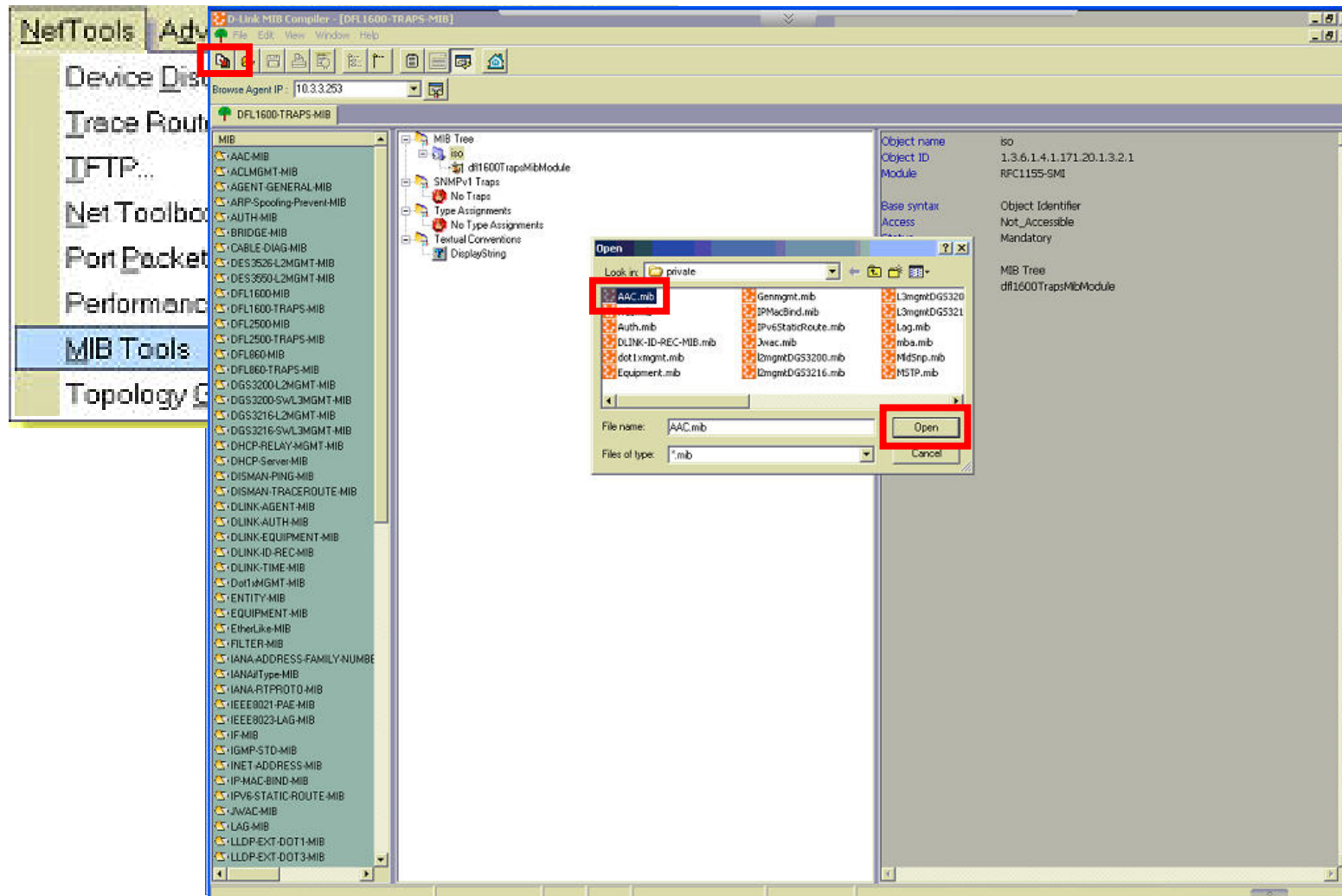
The screenshot illustrates the NetTools Performance Monitor interface. On the left, the 'NetTools' menu is open, with 'Performance Monitor...' highlighted. A red box highlights this menu item, and a red arrow points to the main application window. The main window, titled 'Performance Monitor - [Data Distribution Chart]', displays a table of data for various interfaces. A red box highlights the table header and the first two rows of data. Below the table, a 'Line Chart' shows data distribution over time, with a 'Chart Case' panel on the right. A 'Statistic' panel at the bottom provides summary values for the selected data.

Port Index	0~64Octets	65~127Octets	128~255Octets	256~511Octets	512~1023Octets	1024~1518Octets
22	2	2	2	2	2	2
24	2	2	2	2	2	2

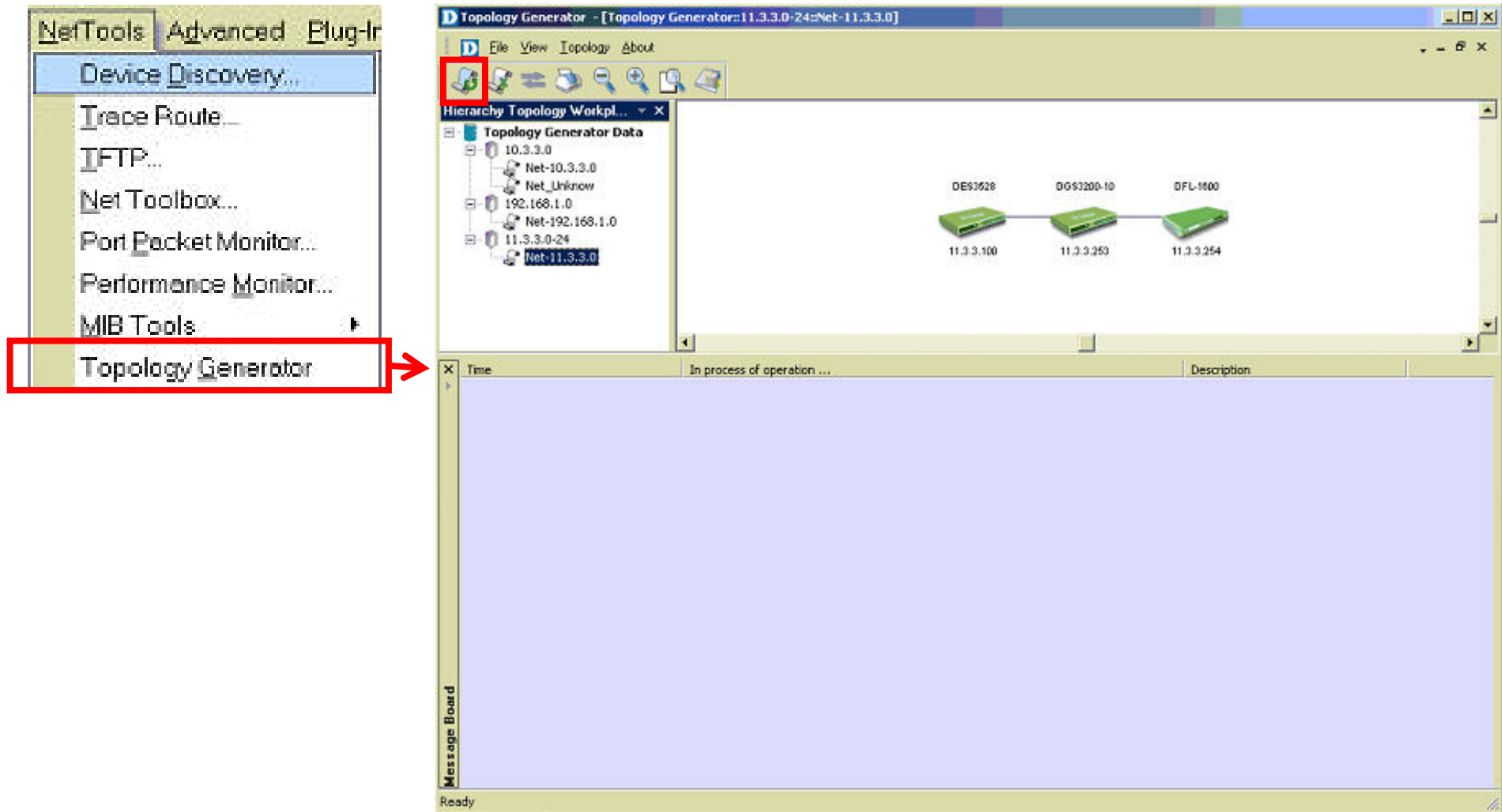
Statistic:

Max Value: 10 Min Value: 0 Ave Value: 5
Max Value X: 16:32:56 Min Value X: 16:32:21 Clear

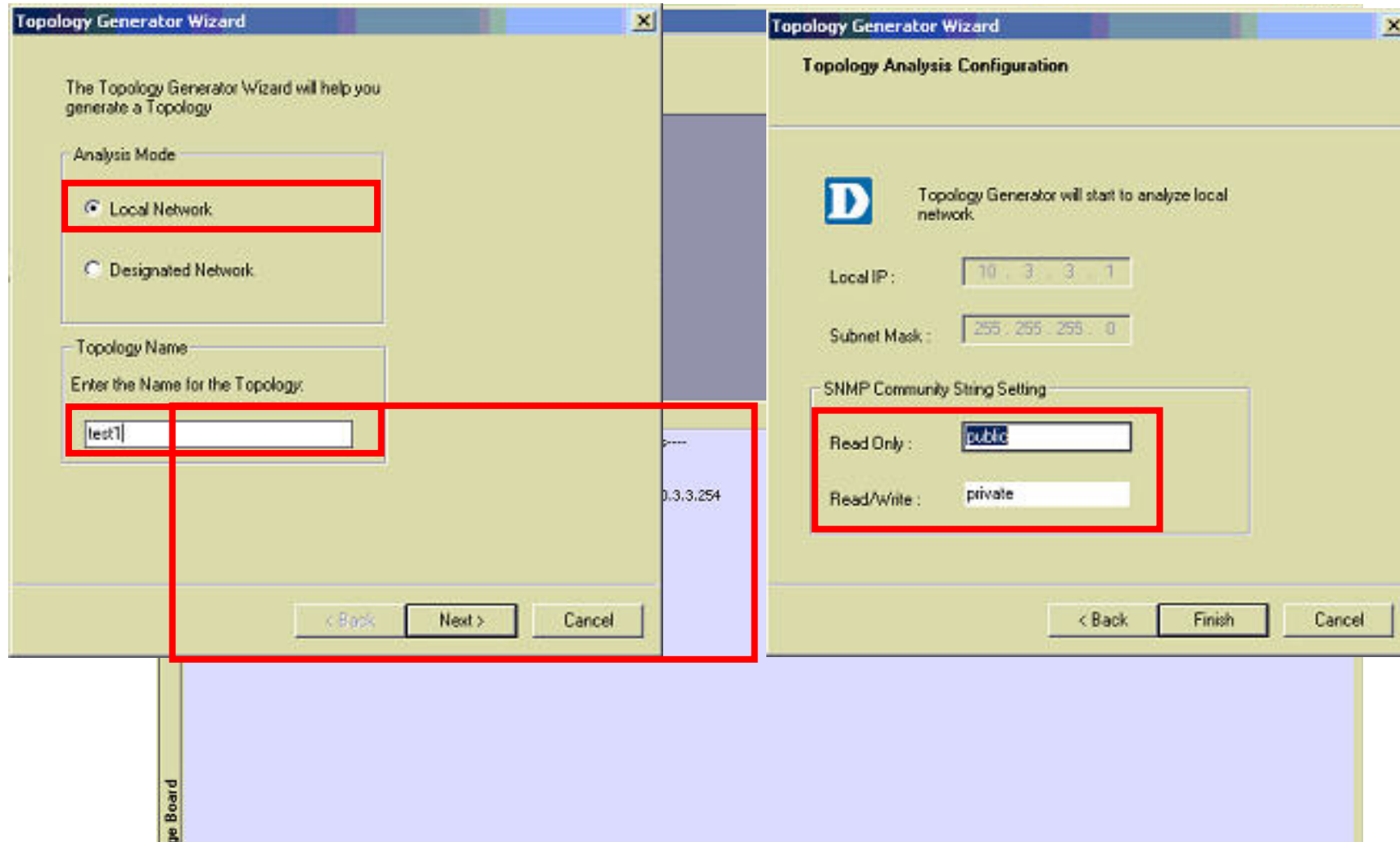
NetTools Function – MIB Tools



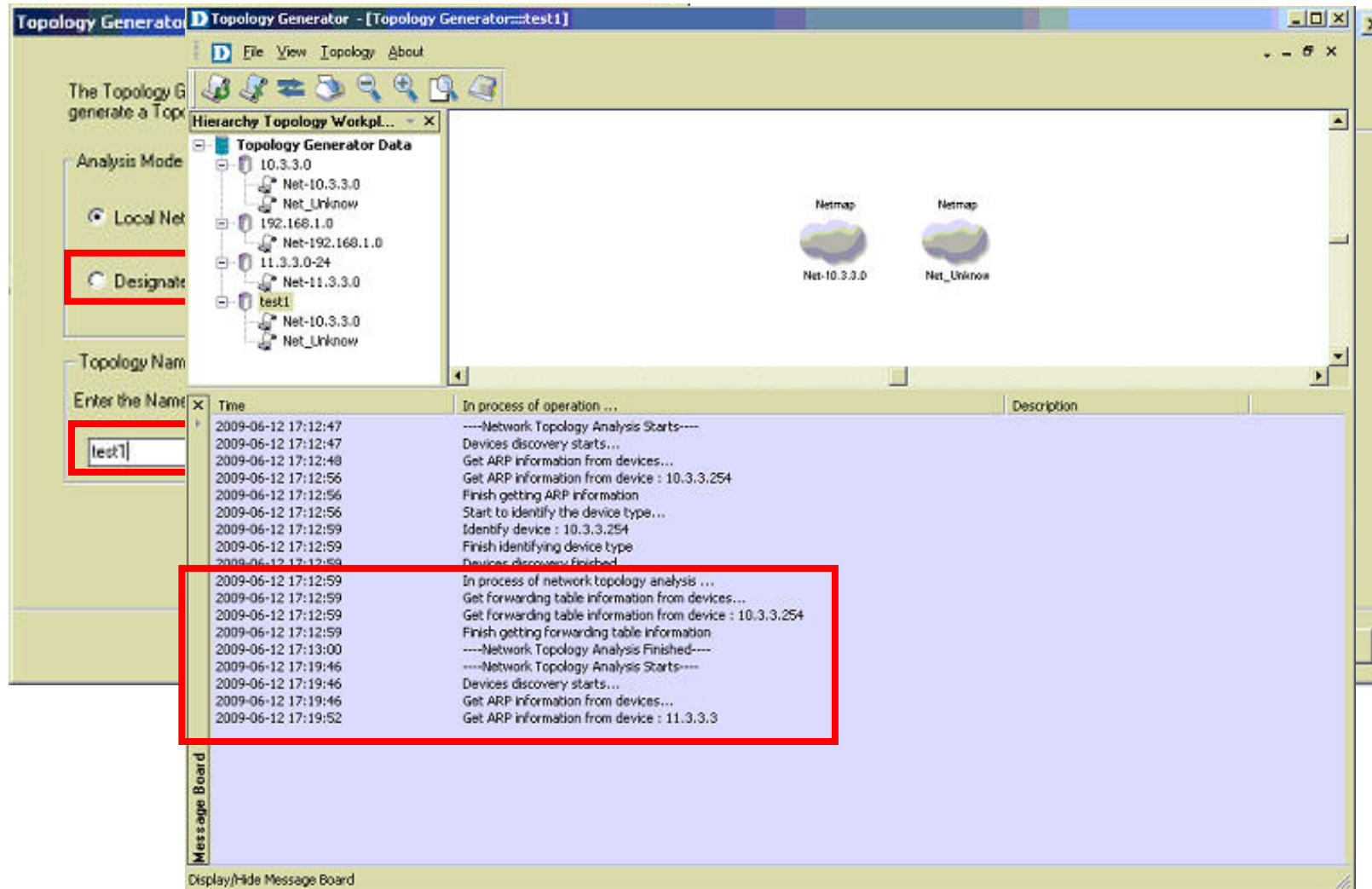
NetTools Function – Topology Generator



NetTools Function – Topology Generator



NetTools Function – Topology Generator



Advance Function

Advance Function

The screenshot displays the D-View 6.0 software interface. The main window shows a network topology with several devices: a 'NonSNMP' device (IP 10.3.3.1), a 'DES3526' switch (IP 192.168.1.1), another 'DES3526' switch (IP 192.168.1.2), a 'DGS3200-10' switch (IP 11.3.3.253), and a 'DES3528' switch (IP 11.3.3.100). A red box highlights the 'Advanced' menu, which is open to show options like 'Link Capacity Check...', 'Device Type Check...', 'Safeguard Check...', 'All of ARP Info...', and 'Services Manager...'. A yellow background is overlaid on the topology area with text describing the functions. Below the topology is a 'Message Board' log showing a series of link status changes for various devices over time.

Monitor and modify the link status.

Check the network for new and updated devices.

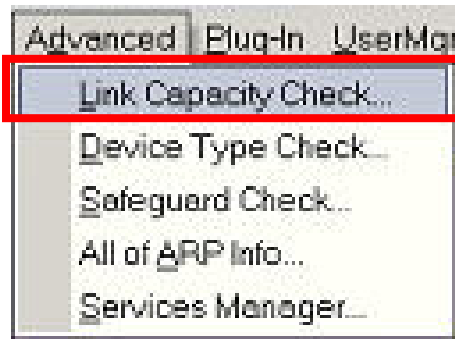
Check the safeguard status of devices.

Retrieve ARP information from devices in the topology.

Check and modify SNMP and Syslog UDP port.

Time	Source Device IP	Description
2009-06-11 14:07:36	192.168.1.2	First_Domain:First_Netmap DES-3526 Link Down
2009-06-11 14:07:42	192.168.1.2	First_Domain:First_Netmap DES-3526 Link Up
2009-06-11 14:07:45	11.3.3.253	First_Domain:First_Netmap DGS-3200-10 Up -> Down
2009-06-11 14:08:00	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 14:08:00	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Down
2009-06-11 14:08:01	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 14:08:01	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Down
2009-06-11 14:08:23	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Up
2009-06-11 21:33:11	11.3.3.100	First_Domain:First_Netmap DES-3528 Link Down
2009-06-12 11:30:28	192.168.1.2	First_Domain:First_Netmap DES-3526 Link Down
2009-06-12 14:29:40	192.168.1.2	First_Domain:First_Netmap DES-3526 Link Down
2009-06-13 10:17:54	192.168.1.2	First_Domain:First_Netmap DES-3526 Link Up

Advance Function

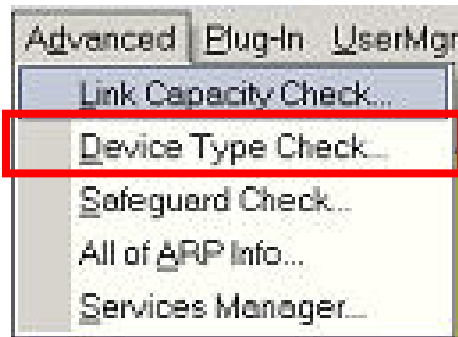


The 'Link Capacity Check' dialog box displays a table with the following data:

Link Name	Capacity	DevName-1	DevIP-1	DevPort-1	DevName-2	DevIP-2	DevPort-2	LinkID	FstDevComm	SndDevComm
	100M	DES-3528	192.168.1.2	0	DFL-1600	192.168.1.1	0	243	public	public
	100M	DES-3528	192.168.1.2	0	DGS-3200-10	11.3.3.253	0	244	public	public
	100M	DES-3528	192.168.1.2	0	Dview-6	10.3.3.1	0	246	public	public
	100M	DGS-3200-10	11.3.3.253	0	DES-3528	11.3.3.100	0	247	public	public

At the bottom of the dialog box, there are four buttons: Check, Stop, Update, and Close.

Advance Function

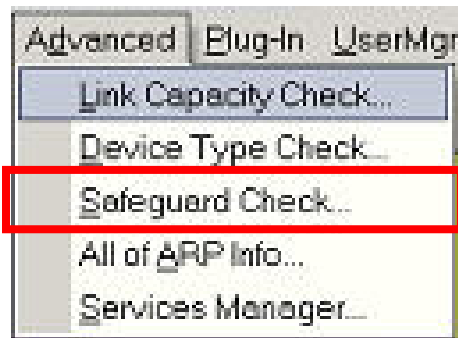


The 'Device Type Check' dialog box displays a table with the following data:

Device Name	IP	Type	Checked Type	Read Commu...	Write Commu...
DFL-1600	192.168.1.1	DFL1600	DFL1600	public	private
Dview-8	10.3.3.1	NonSNMPDevice	NonSNMPDevice	public	private
DGS-3200-10	11.3.3.253	DGS3200-10	DGS3200-10	public	private
DES-3526	192.168.1.2	DES3526	DES3526	public	private
DES-3528	11.3.3.100	DES3528	DES3528	public	private

At the bottom of the dialog box, there are four buttons: Check, Stop, Update, and Close.

Advance Function

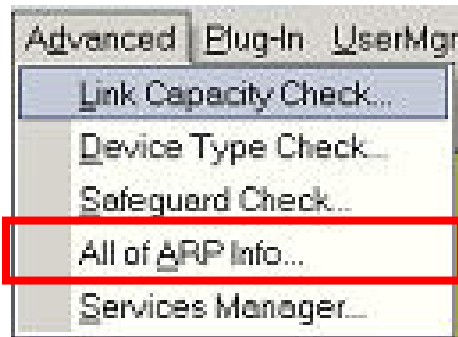


The 'Safeguard Check' window displays a table with the following data:

Device Name	Type	IP	Safeguard	Read Commu...	Write Commu...
DFL-1600	DFL1600	192.168.1.1	Disable	public	private
DGS-3200-10	DGS3200-10	11.3.3.253	Disable	public	private
DES-3528	DES3528	192.168.1.2	Disable	public	private
DES-3528	DES3528	11.3.3.100	Disable	public	private

At the bottom of the window, there is a progress bar with five blue segments, and four buttons: Check, Stop, Update, and Close.

Advance Function

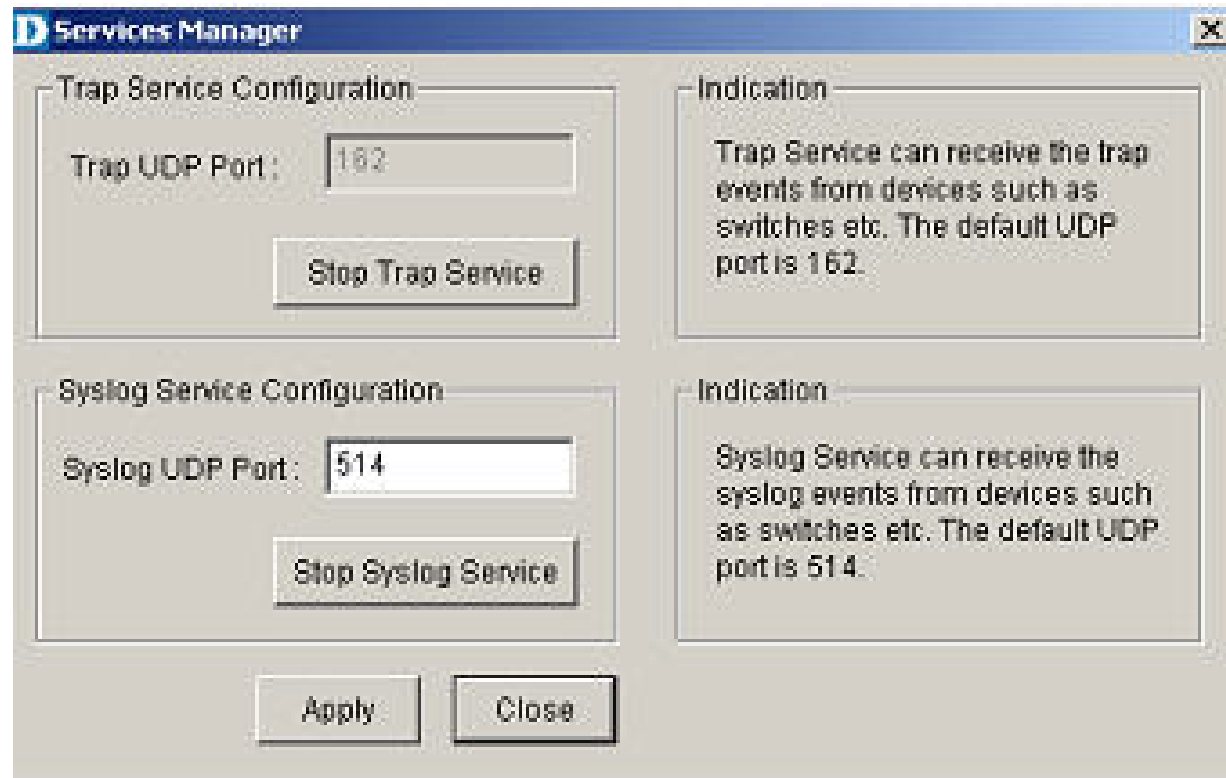
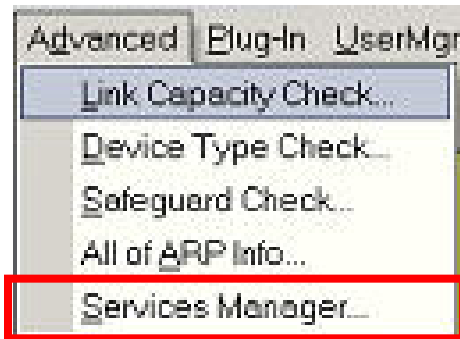


The 'ARP Information Retrieve' window displays a table with two columns: IP and MAC. The data is as follows:

IP	MAC
192.168.1.0	FFFFFFFFFFFF
192.168.1.1	0013463DEF44
192.168.1.2	0080C8352833
11.3.3.100	001E58500A30

At the bottom of the window, there are three buttons: Refresh, Stop, and Close.

Advance Function



D-View6 模組

D-View6 模組

› **D-View6 Module**

- D-View Module is a graphic interface.
- Provide a easy way to monitor and configure D-Link devices.
- Provide a real-time devices state information.

› **How To Install D-View6 Module**

- Go to PMD System and download D-View6 Module for specific D-Link devices.
- Install D-View6 module Application.

› **How To Use D-View6 Module**

- Just double click device icon from the topology view window.

D-View6 模組

The screenshot displays the D-View 6.0 network management interface. The main window shows a network topology with several DGS-3450 switches and GenSNMP devices. A specific switch with IP 172.17.5.242 is highlighted with a blue box. Below the topology, a detailed view of the switch's front panel is shown, including the port configuration and status indicators. The interface includes a menu bar (File, View, Topology, Application, System, NetTools, Advanced, Help) and a toolbar with various icons for network management tasks.

Hierarchy Topology ...

- Root
 - DHQ
 - SF
 - Net_Unknown
 - Net-128.1.0.0
 - Net-160.17.1.0
 - Net-172.17.5.0
 - Net_172.1:
 - Net_172.1:
 - Net_172.1:
 - Net_172.1:

172.17.5.242

Basic Configuration | RMON | Bridge | VLAN | SNMP V3 | Security Management | Layer 2 Management | Layer 3 Management | Single IP | Help

D-Link

xStack
Power
Console
RPS
4950
1600 Port

DGS-3450

Get: (DISNMP++) Ok! Request: Led Status. Receive at 03:15:42 下午.

Time	Source device's interface	Description

Demo

Install & Use D-View6 Module

各學校自行上傳D-view topo資料

The screenshot displays the D-View 6.0 software interface. The main window shows a network topology diagram with three devices: two red switches labeled DES-3528 and one green switch labeled DGS-3427. The switches are connected to each other, with IP addresses 1.1.1.1 and 2.2.2.2 shown. The DGS-3427 switch has IP addresses 172.17.4.254 and 172.17.99.254. A context menu is open over the diagram, with the 'Distant-Topo_Update' option highlighted in a red box. The message board at the bottom shows a log of events, including a successful upload of topology to an upper NMS station.

Time	Source Device IP	Description
2010-04-12 15:25:09	172.17.4.132	Confirm to fail to upload topology!
2010-04-12 15:25:22	172.17.4.125	The NMS station has been deleted from upper NMS station 172.17.4.125 !
2010-04-12 15:25:31	172.17.4.125	The NMS station has been added to upper NMS station 172.17.4.125 !
2010-04-12 15:26:06	172.17.4.132	Request to upload topology !
2010-04-12 15:26:06	172.17.4.132	Upload topology to upper NMS station successfully !
2010-04-12 15:26:06	172.17.4.125	No response of notification for successful uploading topology !
2010-04-12 15:26:26	172.17.4.125	The NMS station has been deleted from upper NMS station 172.17.4.125 !
2010-04-12 15:26:38	172.17.4.125	The NMS station has been added to upper NMS station 172.17.4.125 !
2010-04-12 16:11:07	172.17.99.254	hung:hung 111 Up -> Down

出現已下訊息代表上傳D-view資料已成功

2010-04-12 14:56:26	172.17.4.132	Upload topology to upper NMS station successfully !
2010-04-12 14:56:26	172.17.4.125	No response of notification for successful uploading topology !
2010-04-12 14:56:40	172.17.4.125	The NMS station has been deleted from upper NMS station 172.17.4.125 !
2010-04-12 14:56:47	172.17.4.125	The NMS station has been added to upper NMS station 172.17.4.125 !
2010-04-12 15:25:09	172.17.4.132	Request to upload topology !
2010-04-12 15:25:09	172.17.4.132	Confirm to fail to upload topology!

D-view存取控制權限

D-view存取控制權限

The screenshot displays the D-View 6.0 software interface. The main window shows a network topology diagram with several devices and their connections. A context menu is open over the 'GS-3450' device, listing various management options. The 'Message Board' at the bottom shows a log of network events.

Network Topology:

- GS-3450 (10.90.90.16) is connected to DES-3550 (10.90.90.81) via interface 1/47.
- DES-3550 (10.90.90.81) is connected to Catalyst 2960 (10.90.90.100) via interface 1/0.
- Catalyst 2960 (10.90.90.100) is connected to DGS-3324SR (10.90.90.15) via interface 2/1.
- Catalyst 2960 (10.90.90.100) is connected to DWL-3200 (10.90.90.20) via interface 14/0.
- Netmap (Net_10.90.90.16) is connected to GS-3450 via interface 10.90.90.16.

Message Board:

Time	Source device's interface	Description
2007-07-24 13:35:59	10.90.90.100	HQ::Net-10.90.90.0 Dev-10.90.90.100 Down -> Up
2007-07-24 13:36:00	10.90.90.81	HQ::Net-10.90.90.0 Dev-10.90.90.81 Down -> Up
2007-07-24 13:36:00	10.90.90.20	HQ::Net-10.90.90.0 Dev-10.90.90.20 Down -> Up
2007-07-24 13:36:00	10.90.90.16	HQ::Net-10.90.90.0 Dev-10.90.90.16 Down -> Up
2007-07-24 13:36:00	10.90.90.15	HQ::Net-10.90.90.0 Dev-10.90.90.15 Down -> Up
2007-07-24 14:36:58	10.90.90.100	No Record in Database, can't be found Link Up

D-view存取控制權限

The screenshot displays the D-View 6.0 interface for network management. The main window is titled "Administrators Management" and shows a hierarchy of domains: "Super Domain" containing "Super Group" and "mis", and "HQ" containing "Super Group". A table lists administrators with columns for "Administrator", "Domain Na...", "Group Name", and "Description".

A "Right Assignment" dialog box is open, allowing for the configuration of permissions for various function modules. The dialog has columns for "Function Module", "Execute", "Read", and "Write".

Function Module	Execute	Read	Write
MIB Browser/Compile	<input type="checkbox"/>		
Topology Generator	<input type="checkbox"/>		
Batch	<input type="checkbox"/>		
Device Discovery	<input type="checkbox"/>		
Device Extension	<input type="checkbox"/>		
NetTools	<input type="checkbox"/>		
Performance Monitor	<input type="checkbox"/>		
Device Group Manage		<input type="checkbox"/>	<input type="checkbox"/>
Event Manager		<input type="checkbox"/>	<input type="checkbox"/>
Topology Manager		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Device Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
System Log		<input type="checkbox"/>	<input type="checkbox"/>
Domain Manager		<input type="checkbox"/>	<input type="checkbox"/>
Resource Manager		<input type="checkbox"/>	<input type="checkbox"/>
System Config		<input type="checkbox"/>	<input type="checkbox"/>
Administrator Manage		<input type="checkbox"/>	<input type="checkbox"/>

At the bottom, a "Message Board" window shows a log of network events with columns for "Time" and "Source device".

Time	Source device
2007-07-24 13:35:59	10.90.90.11
2007-07-24 13:36:00	10.90.90.8
2007-07-24 13:36:00	10.90.90.20
2007-07-24 13:36:00	10.90.90.16
2007-07-24 13:36:00	10.90.90.15
2007-07-24 14:36:58	10.90.90.100

D-view存取控制權限

- › Used in Client-Server Mode (Professional Version Only)
- › In D-View 6.0, we can use Group to manage access right to users.
- › Users can just access the groups witch they have rights.
- › Administrators can assign necessary rights to users.

D-Link DPH-150SE

介紹與操作說明及簡易故障排除

D-Link Taiwan DTSS 謝元博

公司 02-66000123#8667

手機 0972-355-160

Cluster_Hsie@dlink.com.tw

提供設備項目-網路電話

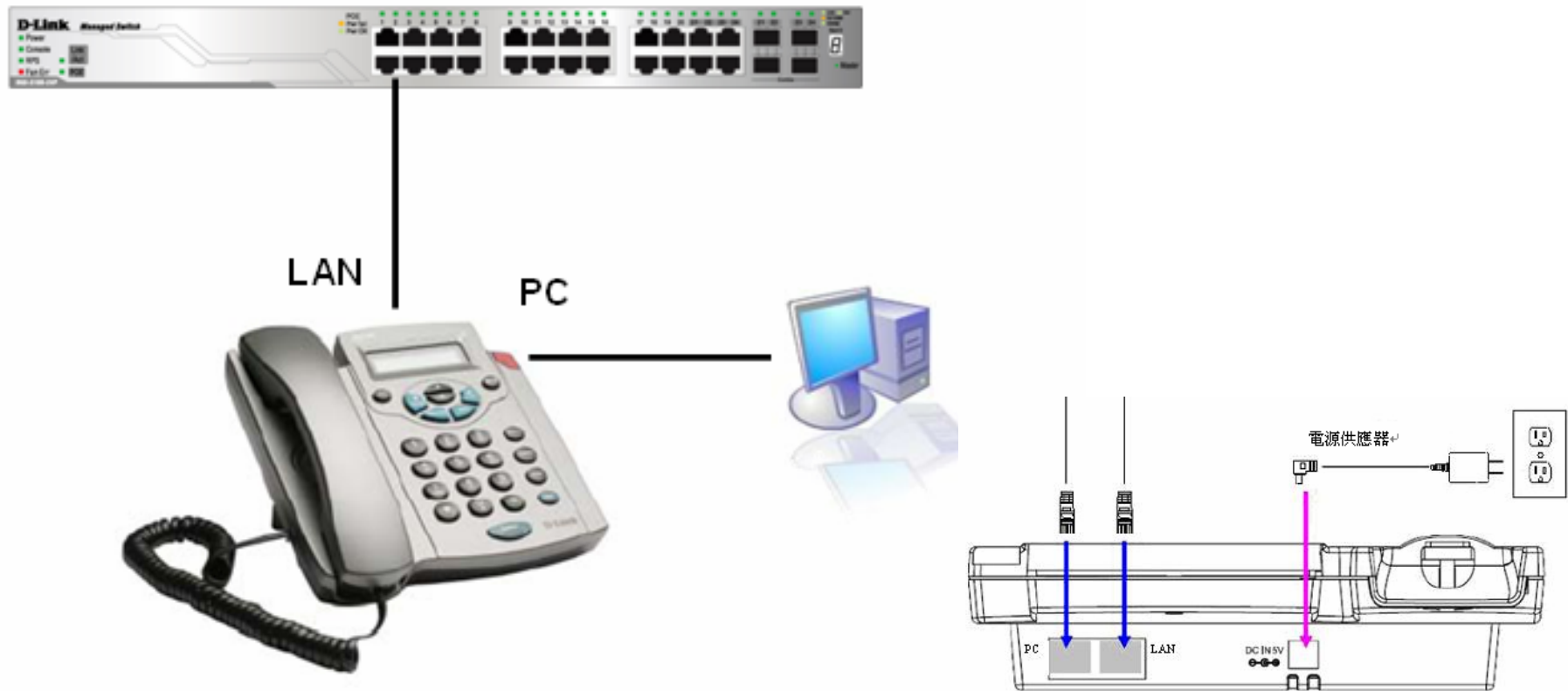
網路電話 DPH-150SE

- 高效能高擴充性：
 - 具備2埠Gigabit網路介面，串接教室電腦提供高速傳輸
 - 內建POE介面
- 整合多元應用
 - 支援IPv4/v6 Dual Stack網路電話應用
- 穩定安全網路連線
 - 802.1Q VLAN：可依不同VLAN設定其Qos優先權
- Auto Provision功能：集中派送設定檔及韌體更新
- 節能減碳
 - 搭配WiNOC排程功能，集中管理電源節能省電
- 中文螢幕顯示，方便操作使用



話機連接方法

- › 話機標示為LAN的Port接至交換器
- › 話機標示為PC的Port連接至PC

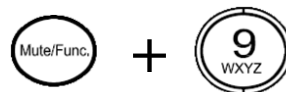


VoIP 相關Server說明

- › **APS Server:**負責針對話機進行自動升級韌體與部署話機設定等資料
- › **SIP Server:**負責話機帳號註冊與後續通話處理之運作
- › 話機初次連上網路會指向**APS Server**報到,升級版本與取得電話號碼與**SIP Server IP**等設定,之後話機轉向**SIP Server**註冊帳號密碼,成功後可開始通話

常用功能操作

› 由面板確認IPv4的IP



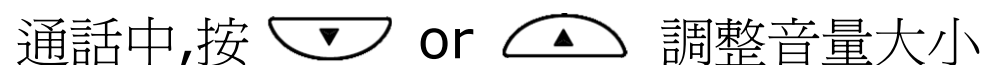
› 由面板上可看到 IPv6 address



› 查看通話紀錄



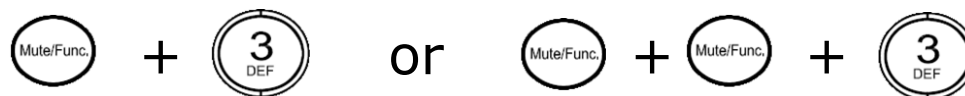
› 調整話筒音量



› 調整  音量




› 確認Firmware版本



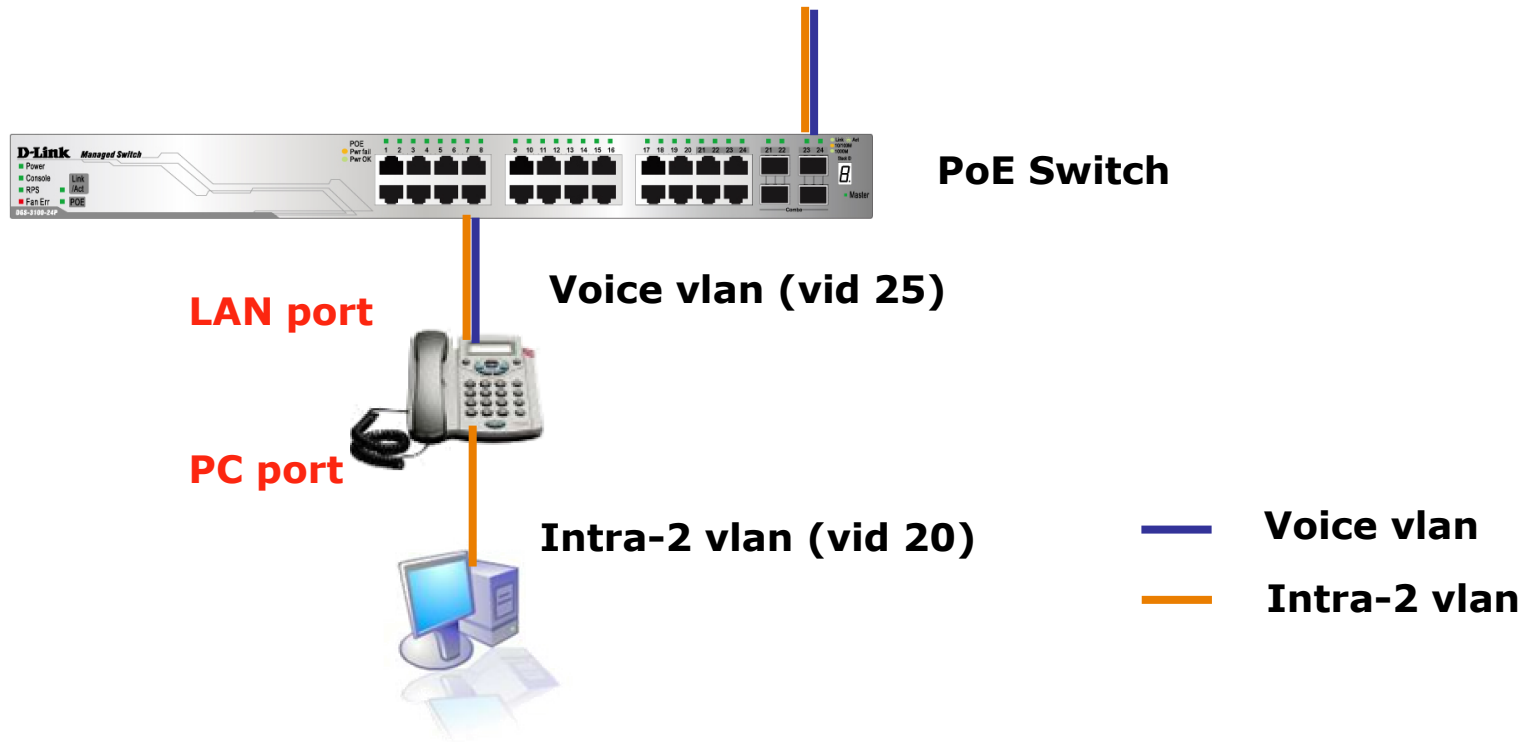
› 確認APS位址



常見問題排除說明

- ›  : [LAN]端網路線沒接上.
 - ›  :網路內沒有DHCP Server發放IP
 - ›  :帳號1111122222註冊成功畫面
 - ›  :註冊失敗畫面,電話號碼會消失
- › 話機若無法註冊成功將會自行Reboot.

話機注意事項



A. 由於話機的設定是透過APS自動供裝,因此話機的LAN Port會設定tag25, 如果將話機移動到其他DGS-3100以外的交換器Port上,可能會因為上層交換器沒有匹配而無法取得IP完成註冊

B. 話機必須在通電的情況下,接在後端的PC網卡才可以順利連線

網路設定

IPv4 / IPv6 / Dualstack

The screenshot shows the D-Link web interface for the DPH-150SE device. The top navigation bar includes '系統設定', '網路設定', 'VOIP', '功能設定', and 'CALL LOG'. The '網路設定' (Network Settings) section is active, showing 'IPV4 / IPV6 SETTING' with a dropdown menu set to 'IPv4 Only'. Below this is the 'DHCP / PPPOE / 固定 IP' section with radio buttons for 'DHCP' (selected), 'PPPoE', and 'Static IP'. The 'DNS 設定' (DNS Settings) section contains two input fields for 'DNS 伺服器 1' and 'DNS 伺服器 2'. At the bottom of the settings area are '確定' (OK) and '重新設定' (Reset) buttons. The 'BROADBAND' section is partially visible at the bottom.

DPH-150SE //	系統設定	網路設定	VOIP	功能設定	CALL LOG
網路設定	IPV4 / IPV6 SETTING				
QoS 設定	IPv4 Only				
NAT 穿透設定	DHCP / PPPOE / 固定 IP				
	<input checked="" type="radio"/> DHCP <input type="radio"/> PPPoE <input type="radio"/> Static IP				
	DNS 設定				
	DNS 伺服器 1	<input type="text"/>			
	DNS 伺服器 2	<input type="text"/>			
	[確定] [重新設定]				
BROADBAND					

SIP server資訊

VOIP\SIP Setting

SIP PHONE 設定	
SIP Phone Port Number	<input type="text" value="5060"/> [1024 - 65535]
REGISTRAR 伺服器	
認證逾期時間	<input type="text" value="3600"/> 秒 [60 - 9999] (預設: 3600 秒)
OUTBOUND PROXY 伺服器	
Send messages via Outbound Proxy	<input checked="" type="radio"/> 停用 <input type="radio"/> 啟動
其它	
Session Timer	<input type="text" value="1800"/> 秒 [90 - 99999]
Media Port	<input type="text" value="41000"/> [1024 - 65535]
Prack	<input type="radio"/> 停用 <input checked="" type="radio"/> 啟動
更新 Session	<input checked="" type="radio"/> None <input type="radio"/> UAC <input type="radio"/> UAS
Session Timer Method	<input checked="" type="radio"/> Invite <input type="radio"/> Update
UDP/TCP	<input checked="" type="radio"/> UDP <input type="radio"/> TCP
Register with Proxy	<input type="radio"/> 停用 <input checked="" type="radio"/> 啟動

SIP Account資訊 VOIP\SIP Account Setting

SIP 帳號設定	
預設帳號	帳號 <input type="text" value="一"/>
指定帳號撥出前置碼	<input type="text" value="**"/>

帳號一設定	
帳號狀態	<input type="radio"/> 停用 <input checked="" type="radio"/> 啓動
網路協定	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6
Registrar 伺服器位址	<input type="text" value="sip.tpc.edu.tw"/>
Registrar Server Port Number	<input type="text" value="5060"/> [1024 - 65535]
Outbound Proxy 伺服器位址	<input type="text"/>
Outbound Proxy Port Number	<input type="text" value="5060"/> [1024 - 65535]
使用者名稱	<input type="text" value="D-Link 北縣帳號"/>
使用者帳號	<input type="text" value="901105001"/>
識別碼	<input type="text" value="901105001"/>
密碼	<input type="password" value="....."/>
IPv4/IPv6 交叉連結	沒有交叉連結 <input type="text" value=""/>
來電鈴聲	預設值 <input type="text" value=""/>
註冊狀態	已註冊

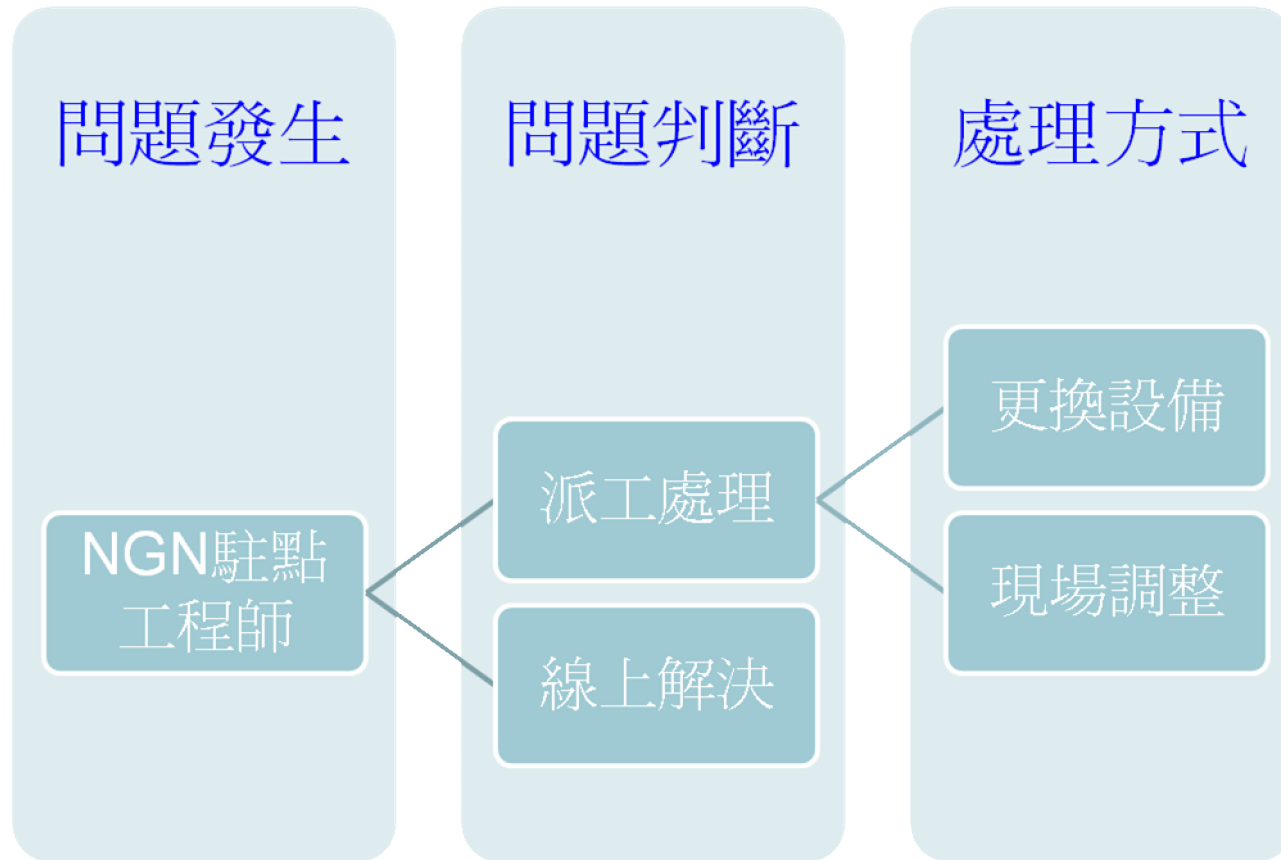
教室網路語音系統設備 未來性及規劃應用

北縣NGN專案維運平台及Call修流程

NGN報修聯繫方式

NGN駐點工程師	黃俊福	張智棠
市話	8072-3456#519	8072-3456#520
網路電話	901100519	901100520

報修流程



Thank you!!

