



新北市政府

Education Department,
New Taipei City Government

教育局



網路管理建置經驗分享

網管輔導員 李煒

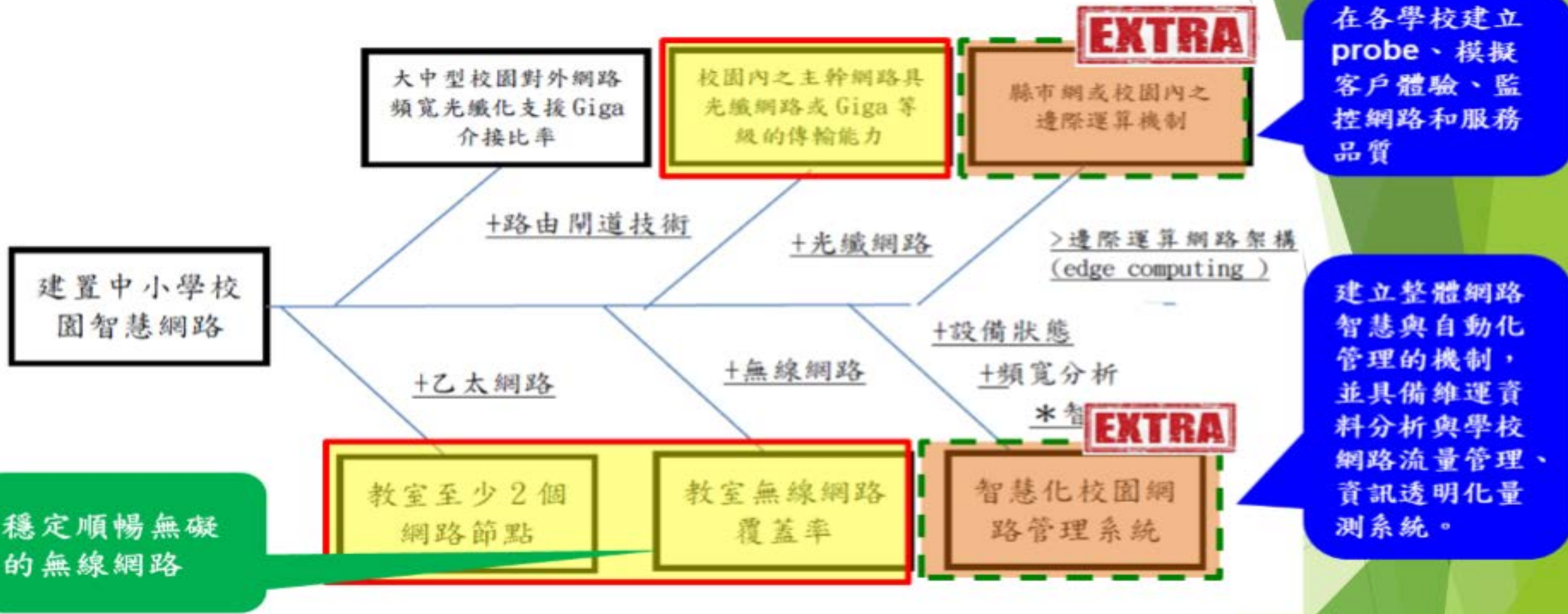
107-110智慧校園網路專案

校園無線網路暨網路基礎建設

智慧網路管理系統

資安稽核、證照考試經驗

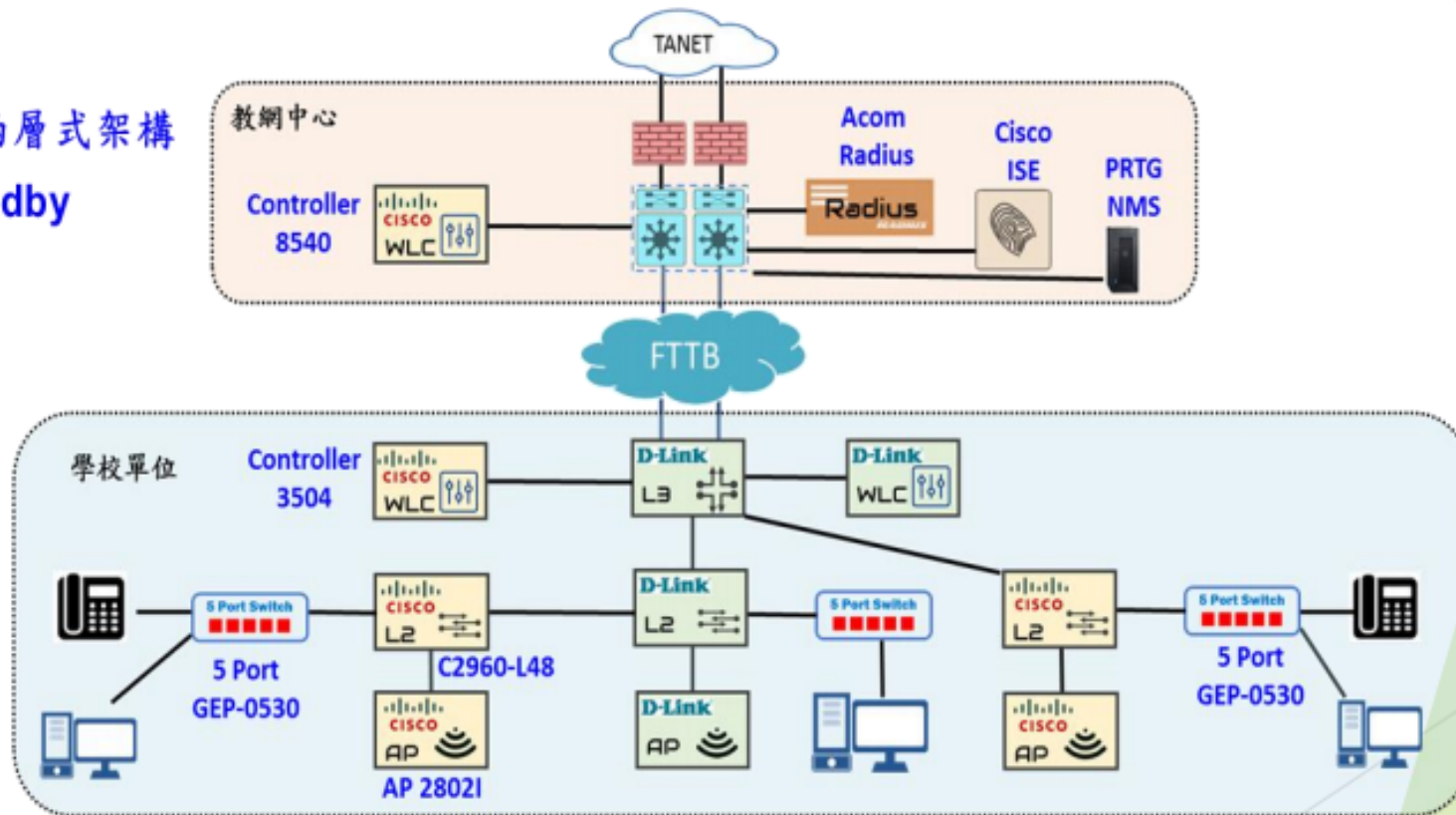
校園智慧網路重要技術關聯



智慧網路管理、骨幹網路架構及概況

• 整體系統架構圖

- Controller兩層式架構
- Active-Standby



107-110工程重點：

1、教室線路備援。

2、無線支援漫遊

TANetRoaming

eduroam

i-Taiwan

NTPC-Mobile

3、骨幹若為cat6 up to 2G

單模up to 10G

4、教室實體線路x2

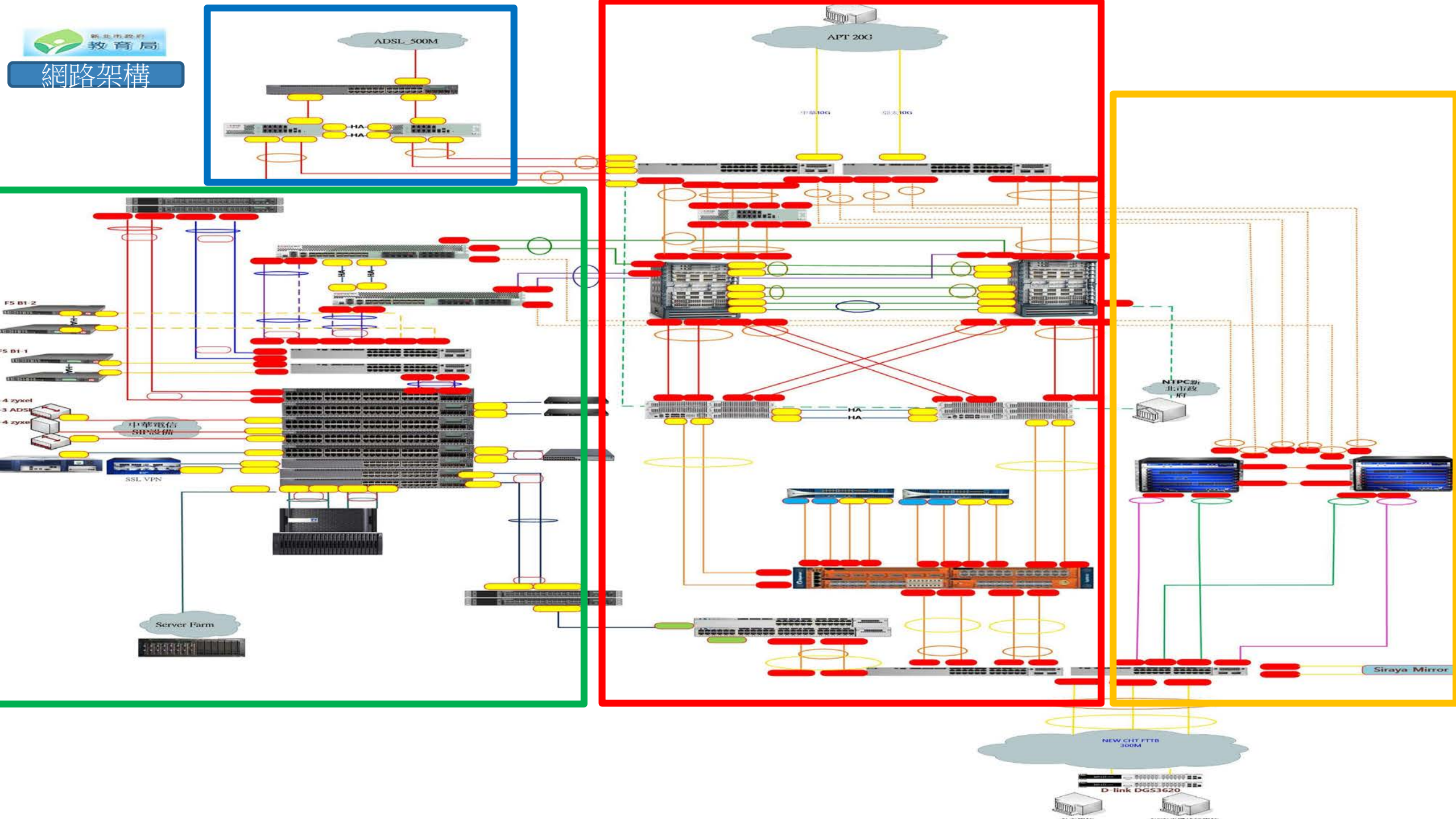
教室可用 1G poe portx5

5、Acom radius server

6、PRTG and Siraya NMS

7、A-S Controller

8、PVC施作品質



校園網路管理應具備的能力

1. 熟悉校園與各棟樓層與教室環境(樓名、教室編號)
2. 瞭解學校網路佈線方式：中繼點或交換器位置
3. 學校網路架構圖與實體放置地點對照表.
4. 識別各網段用途與連接的設備.
5. 會查找IP 所對應的交換器埠號及簡易故障排除.
6. 作業系統網卡：IP,通訊閘,子網路遮罩,DNS 指定.
7. 電腦、手機、平板 mac address 、IP 查找.
8. 學會打電話給中心駐點工程師.



智慧網管

網址：<https://nms.ntpc.edu.tw/>

智慧網路管理 - 中心資訊平台 Ver. v1.20

帳號

密碼

驗證碼
請輸入下方圖示內容
5 9 8 8

登入

請使用本系統之帳號登入。

其他登入方式

縣市網單一簽入

Copyrights 2019 © Siraya Technology Co., Ltd. All rights reserved.

新北市教育局單一認證入口

2

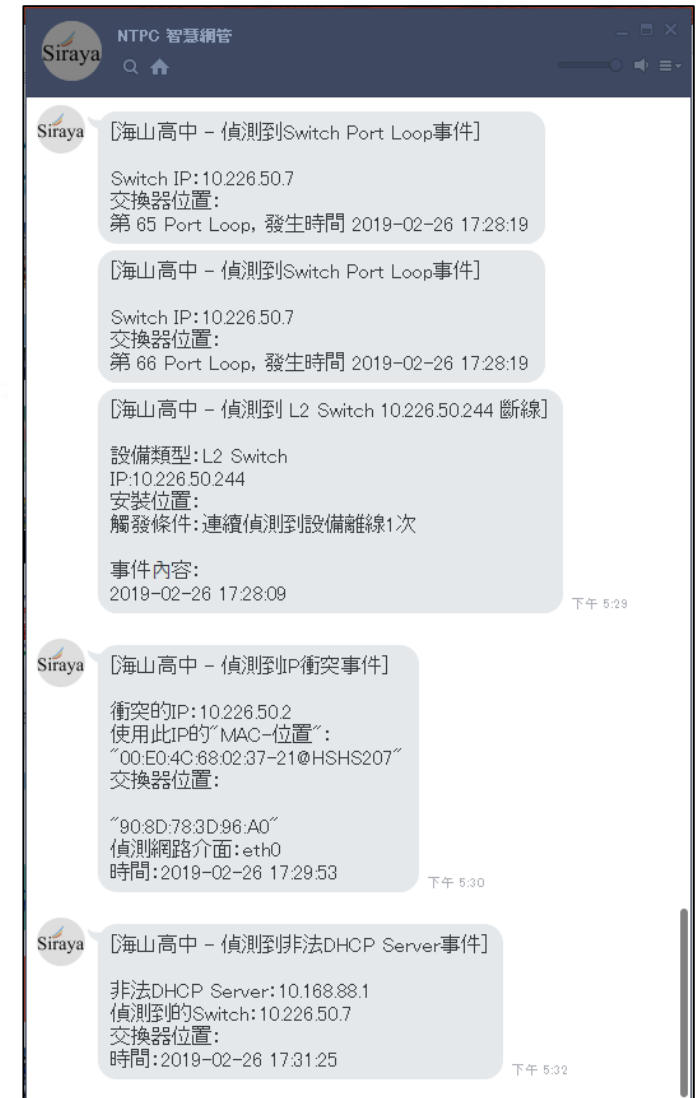
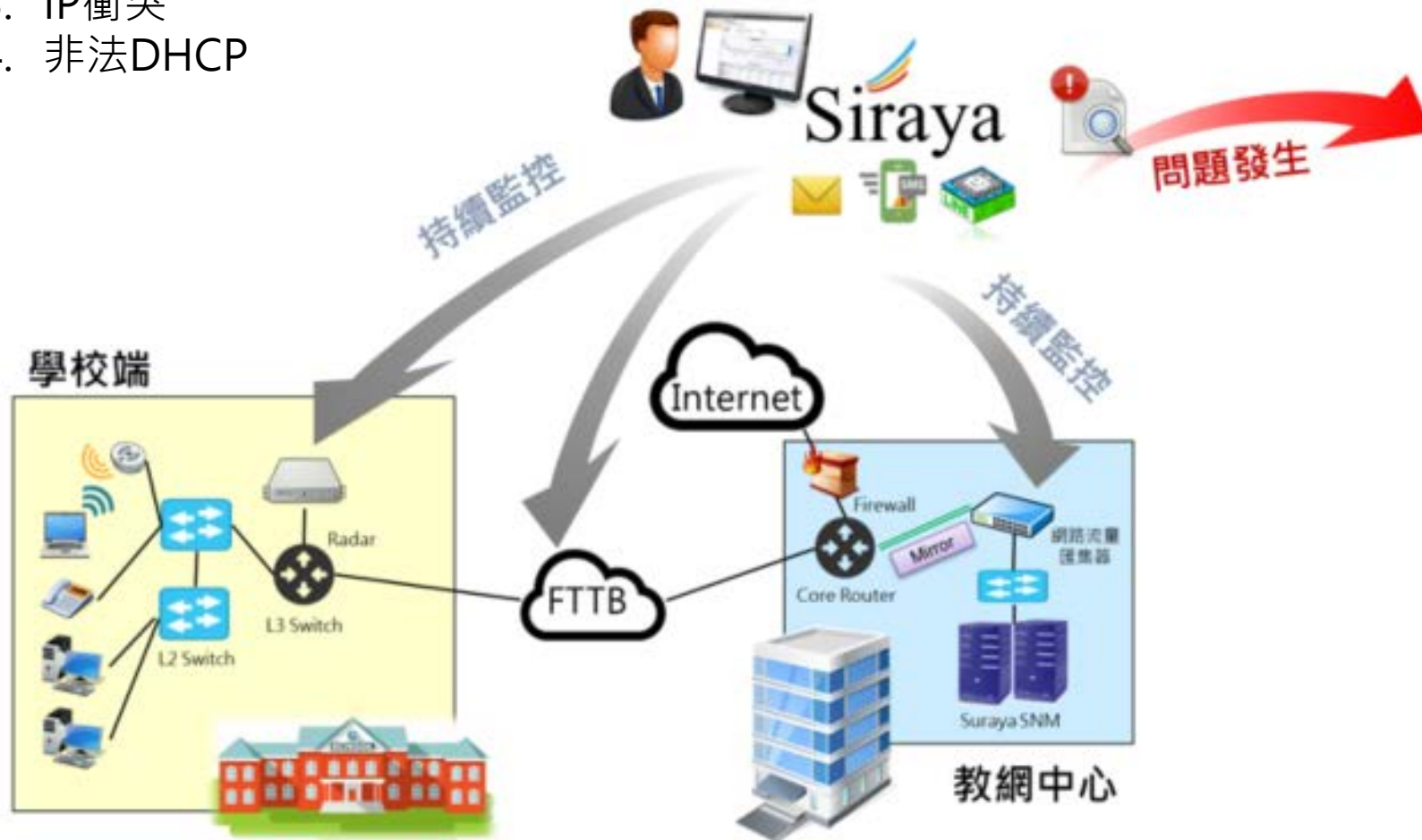
Single Sign-On

登入

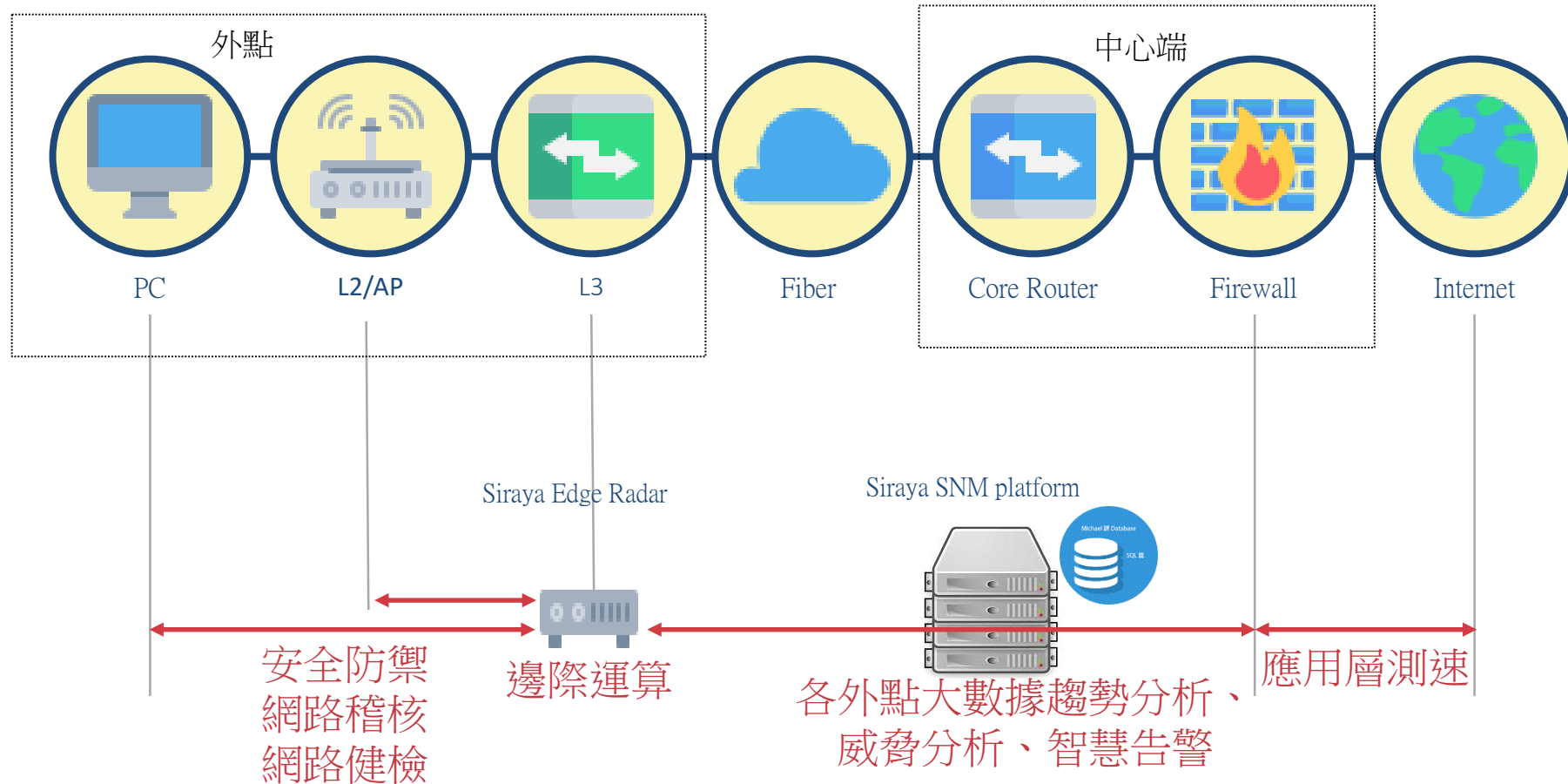
登入

智慧網管偵測問題產生告警

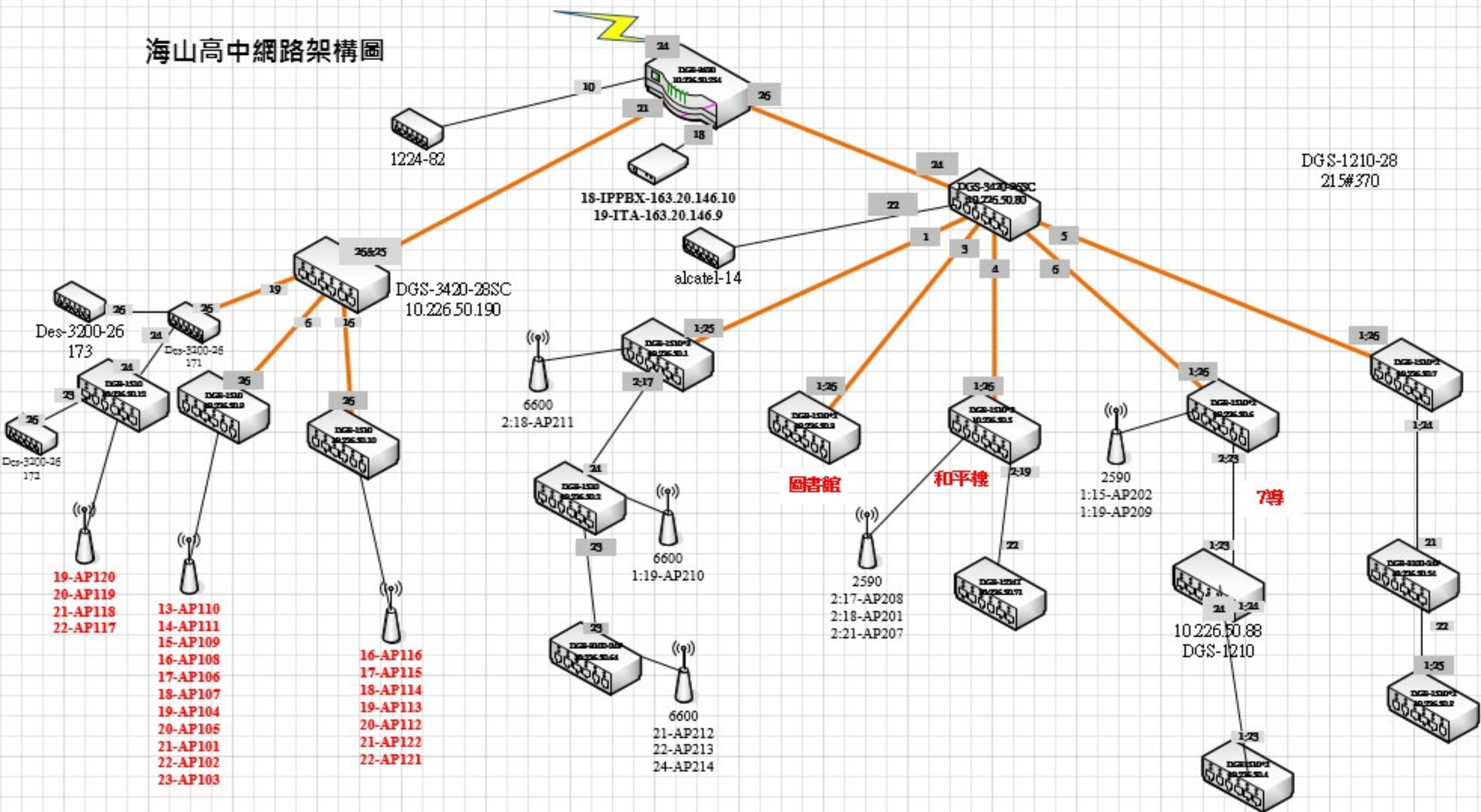
1. Port loop
2. 設備離線
3. IP衝突
4. 非法DHCP



智慧網管整體架構



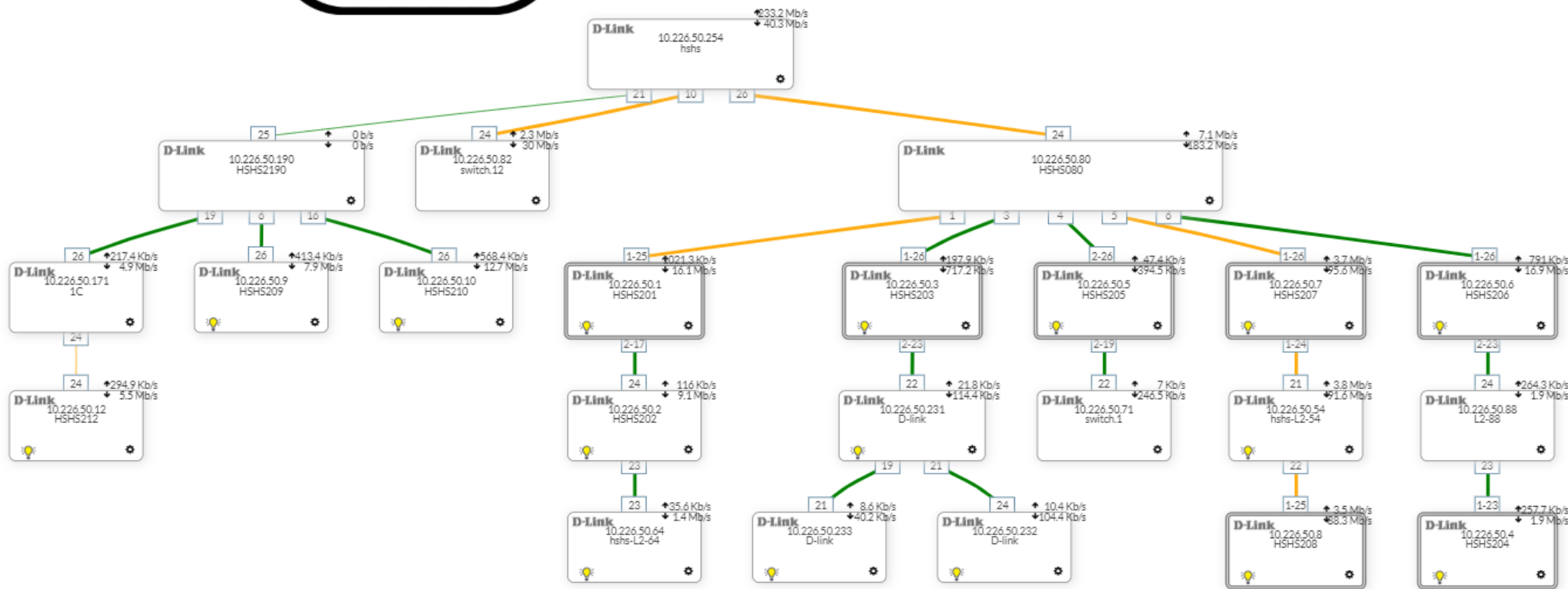
海山高中網路架構圖



智慧網管自動拓譜網路架構

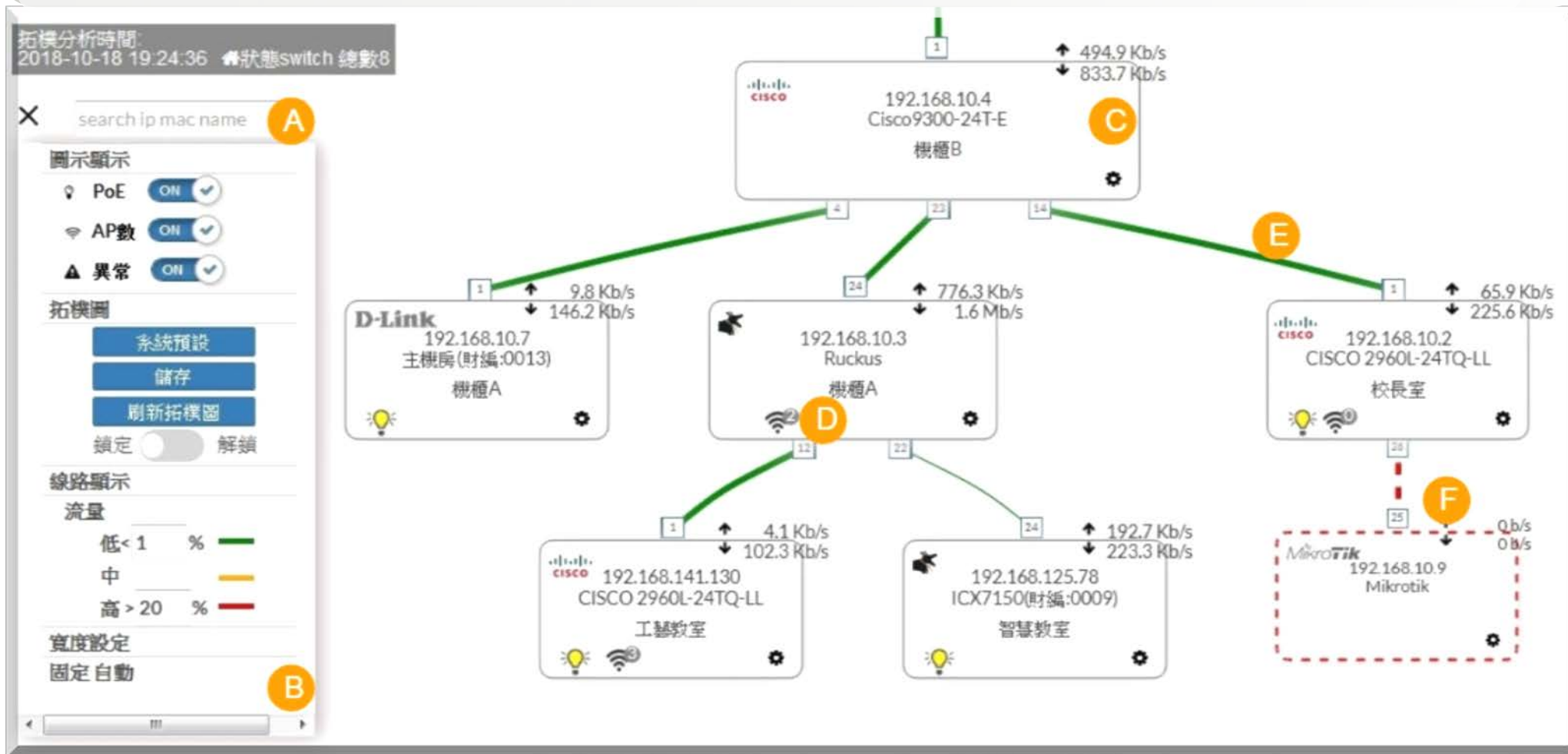
拓模分析時間:
2019-03-14 08:02:58 狀態switch 總數23

search ip mac name



自動網路拓樸

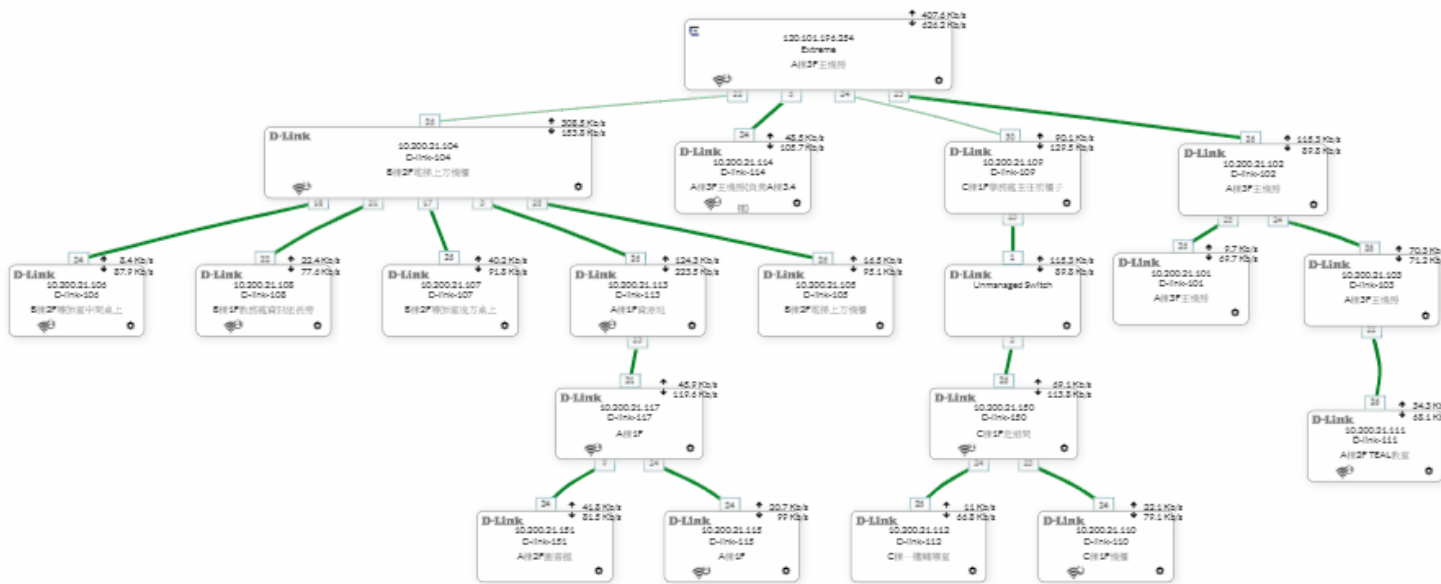
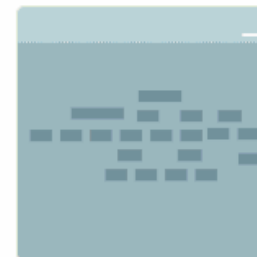
直覺化管理介面，簡單上手，輕鬆管理網路設備



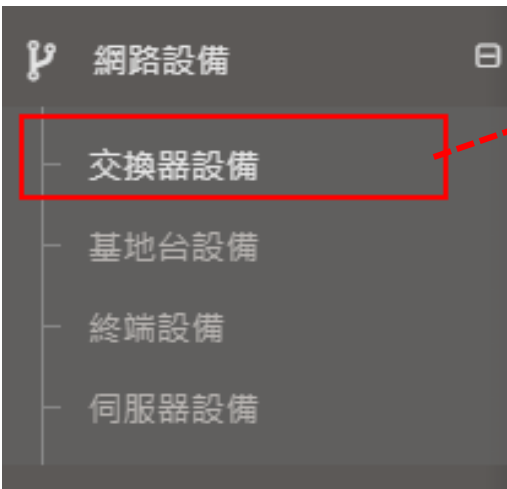
網路拓撲圖 - 可拖移

拓模分析時間:
2018-12-01 08:00:28 🏠狀態switch 總數20

☰ search ip mac name



財產管理-平台註記交換器



點選交換器

輸入放置位置:

編輯

一般

設備名稱: jyes-L2-59

型號: DGS-1210-24P

廠牌: Dlink

類別: L2 SW

屬性: 一般

位置: 校門口警衛室機櫃

備註: 備註

Version: v2c

Read Community: pub*****

Read/Write Community: pri*****

送出 取消

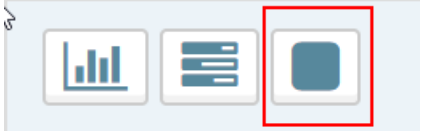
現在有哪些設備在使用中

利用即時數據，可得知目前網路設備現況



校內有哪些網段，網段使用情形是如何

透過IPAM->網段使用狀況，可得知各網段使用情形。



- 163.20.X.X : 學校實體網段
- 10.241.X.X : 班級教室網段
- 10.231.X.X : 電腦教室網段

- 10.226.X.X : 大同的交換器
- 10.228.X.X : 華電的交換器

本日 IP 使用度



交換器 Vlan 設定情形

10.226.184.5

Information Port Vlan

[Dlink][DGS-1510-28XMP][10.226.184.5]

Port	1	3
VLAN	Intra-2 wpa2 mac_auth wlan voip	Intra-2 wpa2 mac_auth wlan voip

VLAN 配置

預防設定造成錯誤發生,建議先進行Switch組態備份

vlan - Tag設定 vlan - unTag設定

[Dlink][DGS-1510-28XMP][10.226.184.5]

PORT:17

VLAN ID	VLAN	管理
請選擇...		新增
25	voip	刪除
33	eduroam	刪除
32	NTPC-Mobile	刪除
31	TANetRoaming	刪除
30	wlan	刪除
36	mac_auth	刪除
35	wpa2	刪除
34	class	刪除
3	MGMT	刪除

17 配置

19 配置

Intra-2 MGMT class wpa2 mac_auth wlan TANetRoaming eduroam NTPC-Mobile voip	Intra-2 wpa2 mac_auth wlan voip
--	---

Intra-2
wpa2
mac_auth
wlan
voip

Intra-2
wpa2
mac_auth
wlan
voip

Intra-2
wpa2
mac_auth
wlan
voip

Intra-2
wpa2
mac_auth
wlan
voip

交換器可以獲得ROUTE TABLE AND ARP TABLE相關資訊

10.226.184.254

Information Port Vlan Traffic Client

Information

Switch Name : Dlink 運作時間 : 38 days, 18:40:25.26

Model : DGS-3620-28TC









IP(s) :

- 10.226.184.254/24
- 10.217.184.254/24
- 10.247.184.254/24
- 163.20.85.126/25
- 192.168.1.254/24
- 10.90.90.254/24
- 10.211.184.254/24
- 10.228.184.254/24
- 10.231.184.254/24
- 10.239.184.254/24
- 10.245.184.254/24
- 10.233.184.254/24
- 10.241.184.254/24
- 10.243.184.254/24
- 10.253.184.254/24
- 163.20.206.185/29
- 10.213.184.254/24
- 10.215.184.254/24

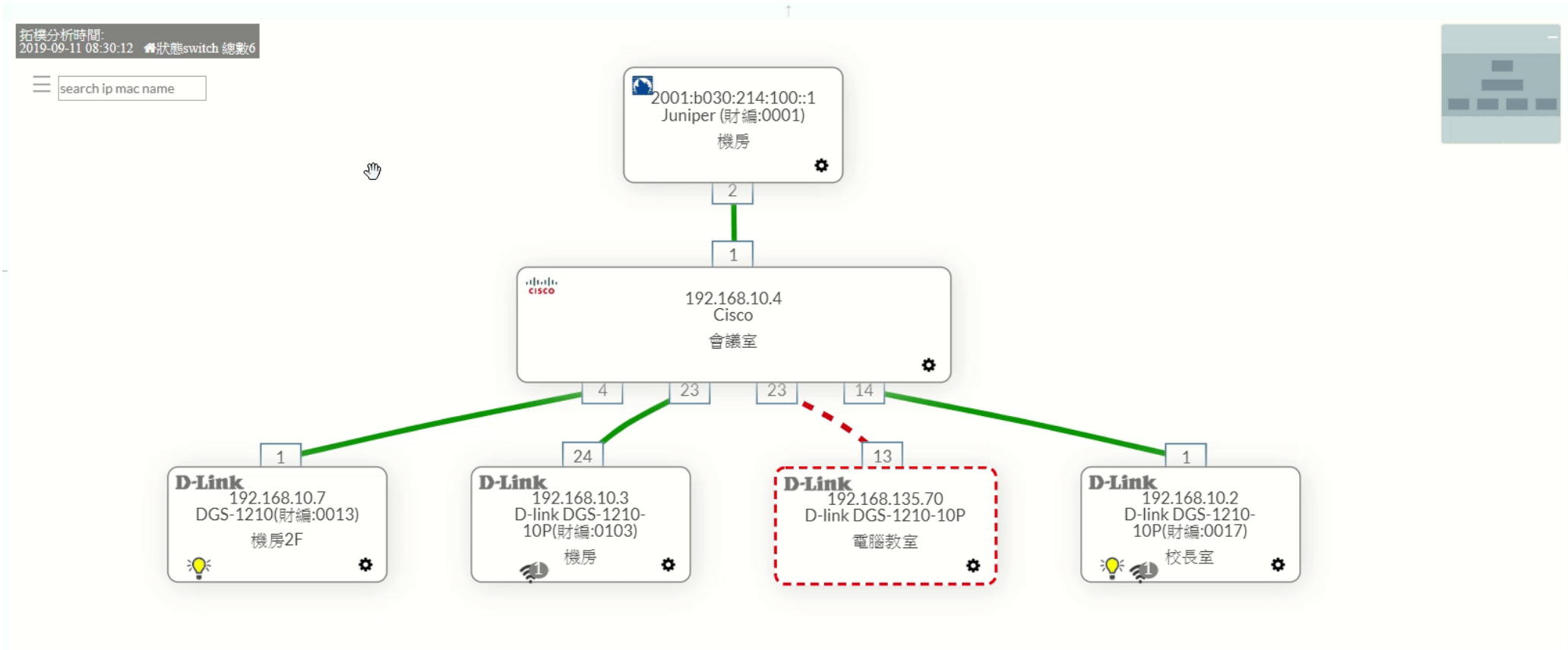
綁定的IP

交換器各埠資訊及功能

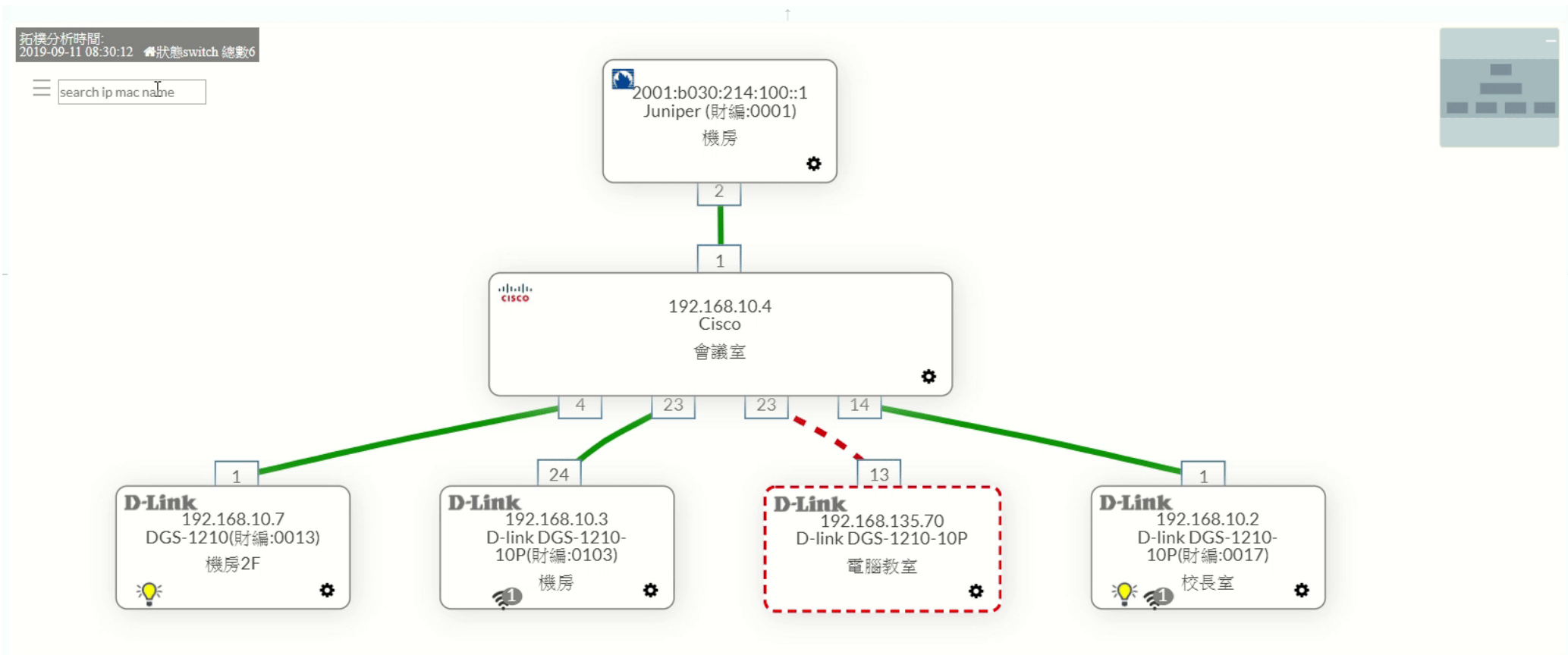
10.226.184.4

Information	Port	Vlan	Traffic	Client	PoE
[Dlink][DGS-1510-28XMP][10.226.184.4]					
PORT					
Port	啟用	PoE 供電	狀態	調速	Reset
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	 	1000 Auto	<input type="button" value="Reset"/>
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	 	10 Auto	<input type="button" value="Reset"/>
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	 	100 Auto	<input type="button" value="Reset"/>
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	 	100 Full	<input type="button" value="Reset"/>

搜尋功能-設備IP



搜尋功能-設備MAC



輸入格式 : 001234abcdef / 001234ABCDEF
00:12:34:ab:cd:ef / 00:12:34AB:CD:EF

IP-MAC歷史資料

報表 → IP-MAC歷史資料

自定義時間區間，想查找的IP或MAC，進行資料搜尋。

報表

起始： 2020-10-01 ~ 結束： 2020-10-13 IP 或 MAC： 10.226.184.245 確認

IP-MAC歷史資料 查詢的結...

輸入關鍵字查詢 每頁 100 筆 顯示欄位 Print

時間	IP	MAC	
2020-10-01	10.226.184.245	B8:27:EB:DF:A7:59	81
2020-10-02	10.226.184.245	B8:27:EB:DF:A7:59	81
2020-10-03	10.226.184.245	B8:27:EB:DF:A7:59	81
2020-10-04	10.226.184.245	B8:27:EB:DF:A7:59	87
2020-10-05	10.226.184.245	B8:27:EB:DF:A7:59	76
2020-10-06	10.226.184.245	B8:27:EB:DF:A7:59	74
2020-10-07	10.226.184.245	B8:27:EB:DF:A7:59	74
2020-10-08	10.226.184.245	B8:27:EB:DF:A7:59	73
2020-10-09	10.226.184.245	B8:27:EB:DF:A7:59	82
2020-10-10	10.226.184.245	B8:27:EB:DF:A7:59	79
2020-10-11	10.226.184.245	B8:27:EB:DF:A7:59	73

10-2.透過IP封鎖

Ans:

- (1) 確認IP後,進入智慧網管-> 封鎖清單, [新增]。
- (3) 將該電腦重新還原, 並安裝防毒與windows update

封鎖

編輯

MAC :

MAC

說明 :

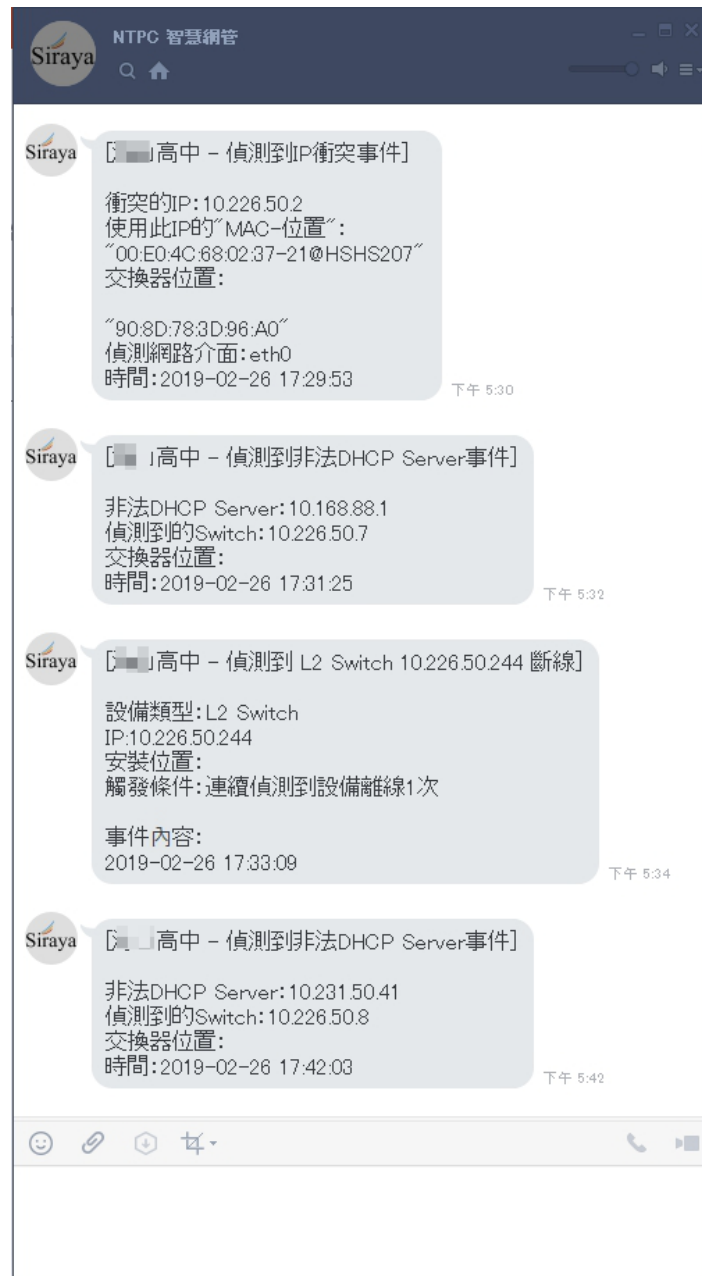
說明

使用IP封鎖 送出 取消

起始 : 2021-03-01 ~ 結束 : 2021-03-14

IP 或 MAC : 請輸入完整IP或MAC 確認

告警通報



告警訊息-交換器斷線

[正德國中 - 偵測到交換器 10.226.202.5 斷線]

設備類型:交換器

設備IP:10.226.202.5

安裝位置:未設定

觸發條件:連續偵測到設備離線2次

時間:

2019-08-30 11:23:09

2019-08-30 11:18:09

建議處理方式:請網管人員至現場確認設備狀況



告警訊息-IP衝突

Siraya

[正德國中 - 偵測到IP衝突事件]

衝突的IP:10.231.202.110
時間:2019-09-03 15:58:25
使用此IP的“MAC資訊”:

MAC:00:23:24:D3:91:BE
MAC別名:未設定
交換器IP:10.226.202.254
交換器:JDJH 第 17 Port
交換器位置:未設定

MAC:B8:27:EB:AE:A6:34
MAC別名:未設定
交換器IP:10.226.202.254
交換器:JDJH 第 2 Port
交換器位置:未設定

建議處理方式:請網管人員登入網管系統排除問題



新北市政府
Education Department,
New Taipei City Government

教育局

告警訊息-非法DHCP

 Siraya

[正德國中 - 偵測到非法DHCP Server事件]

非法DHCP Server: 10.231.202.100

非法DHCP MAC: 00:26:18:D7:A8:E9

交換器IP: 10.226.202.254

交換器: JDJH 第 7 Port

交換器位置:

時間: 2019-09-02 08:04:55

建議處理方式: 請網管人員登入網管系統排除問題

服務品質檢測

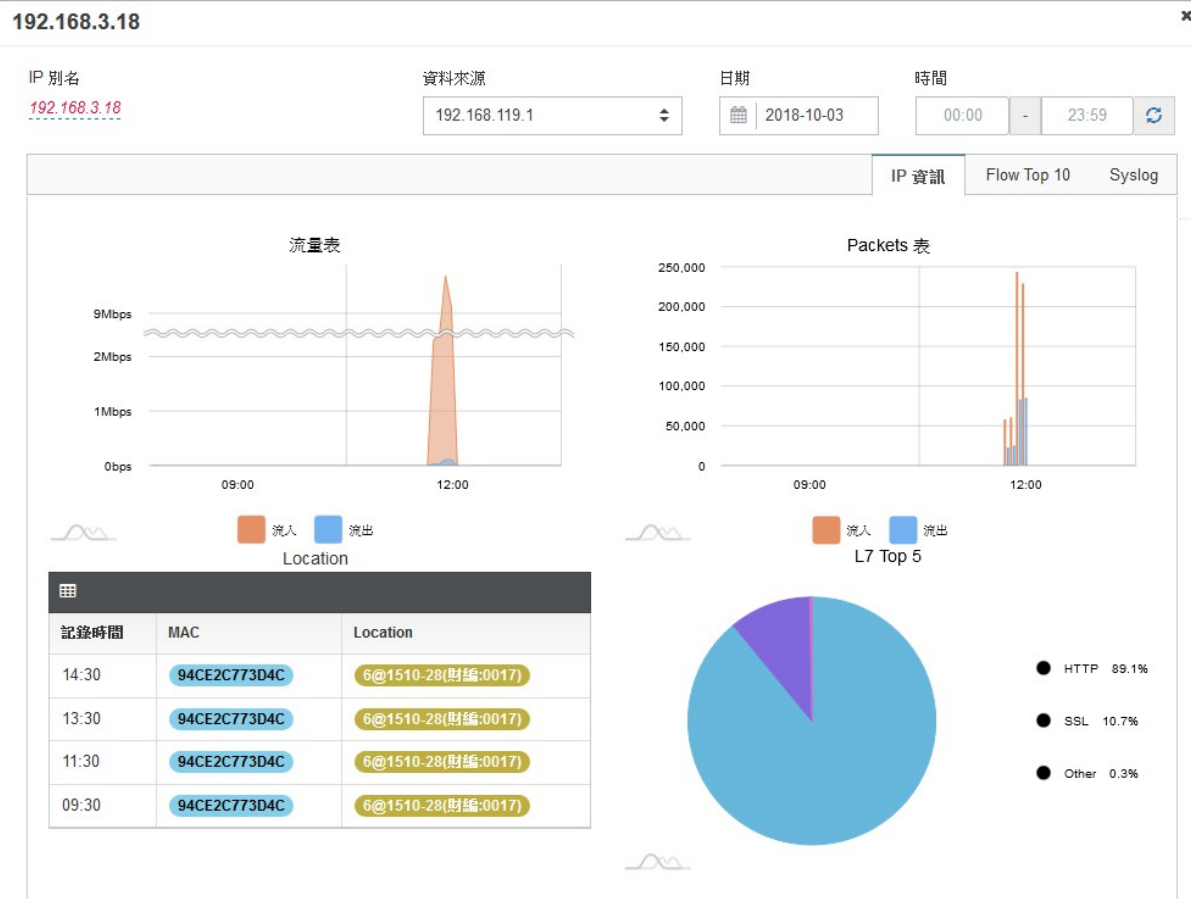
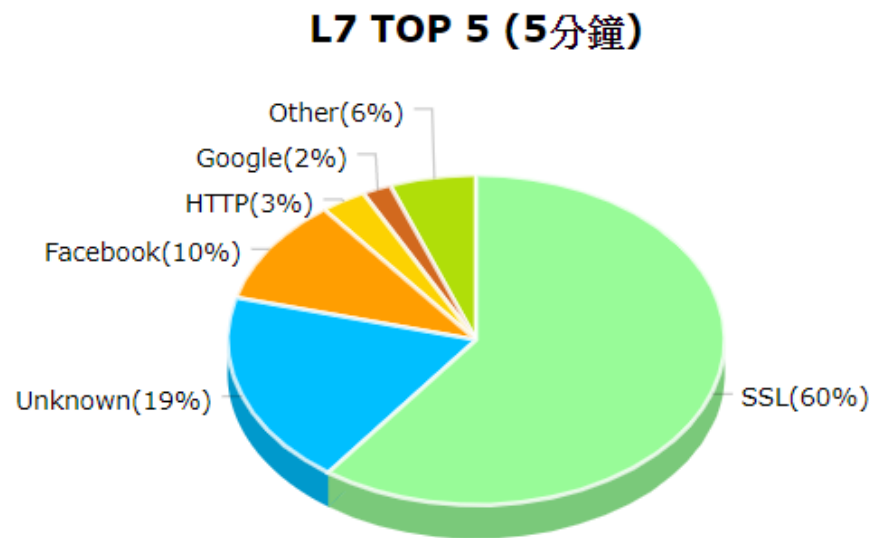
- 綜觀
- 帳號
- IPAM
- 網路設備
- 告警
- 系統
- 通知方式
- 工具
- Pina
- 服務偵測**
- Trace Route
- 一般
- 搜尋設備
- 登入帳號
- 地圖
- SNMP
- 廠商
- Community



應用服務流量分析

校內單一IP分析

全校分析



設備妥善率

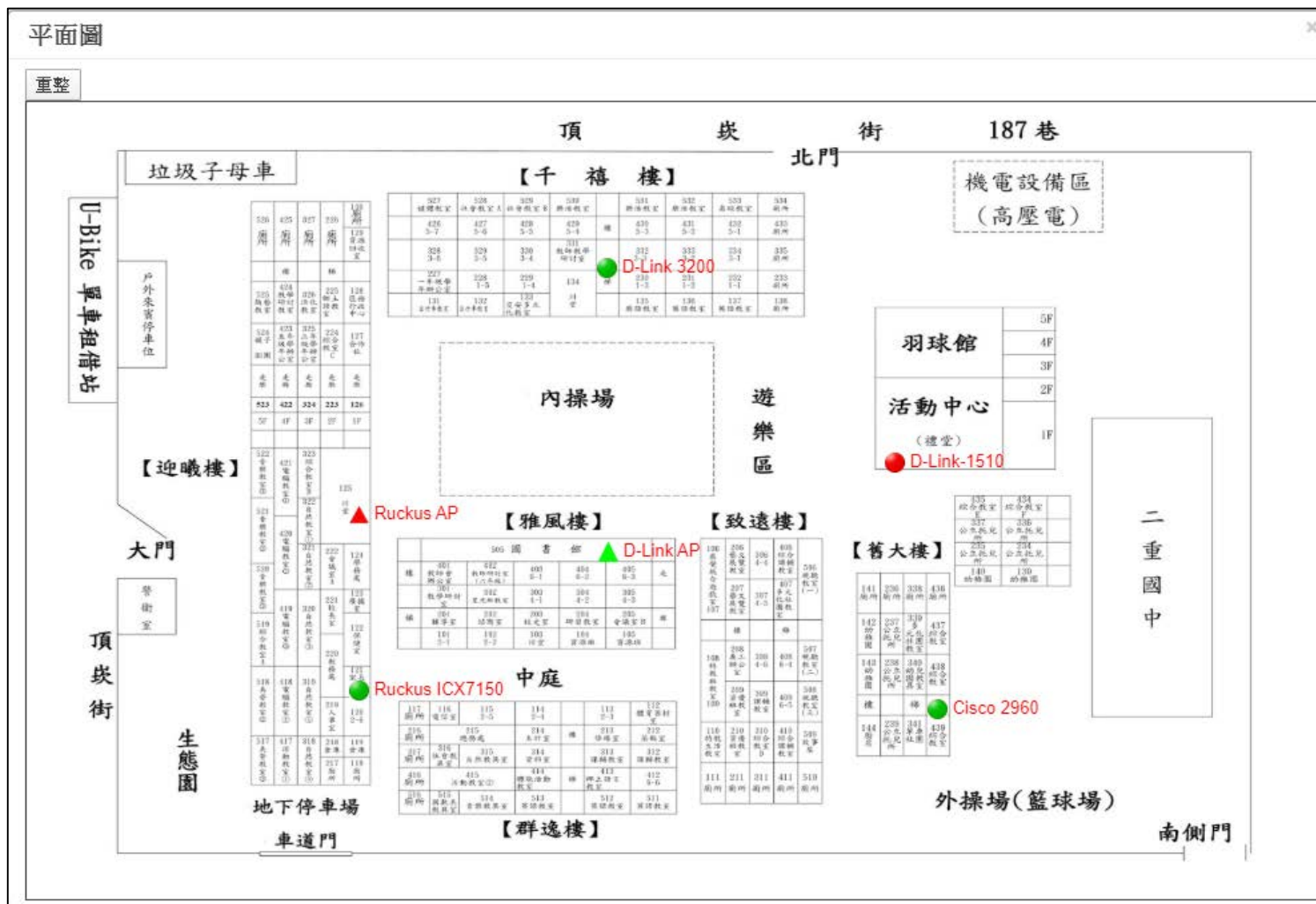
自強國小AP妥善率:(不包含周六日)

設備名稱	設備IP	設備型號	妥善率
Cisco9300-24T-E	192.168.10.4	9300-24T-E	100.00%
CISCO	192.168.10.3	ICX7150	100.00%
主機房(財編:0013)	192.168.10.7	DGS-1210-10P	100.00%
DGS-1210(財編:0015)	192.168.125.30	DGS-1210-10P	99.96%
D-Link 1510	192.168.10.2	DGS-1510-28XMP	100.00%
MT_IPv6(財編:0001)	2001:b030:214:100::1	RB450G	100.00%
Dlink DGS-1510-28XMP	192.168.135.180	DGS-1510-28XMP	0.00%
D-link-1005	192.168.10.5	DES-3200-10	100.00%
D-link-1006	192.168.10.6	DES-3200-10	100.00%
Mikrotik-1008	192.168.10.8	CRS226-24G-2S+	100.00%
Extreme	192.168.141.91	X440-24p-10G	100.00%
Dlink DGS-3620-28TC	192.168.135.181	DGS-3620-28TC	0.00%
Zyvel GS1900-8	192.168.135.115	GS1900-8	0.00%



Map

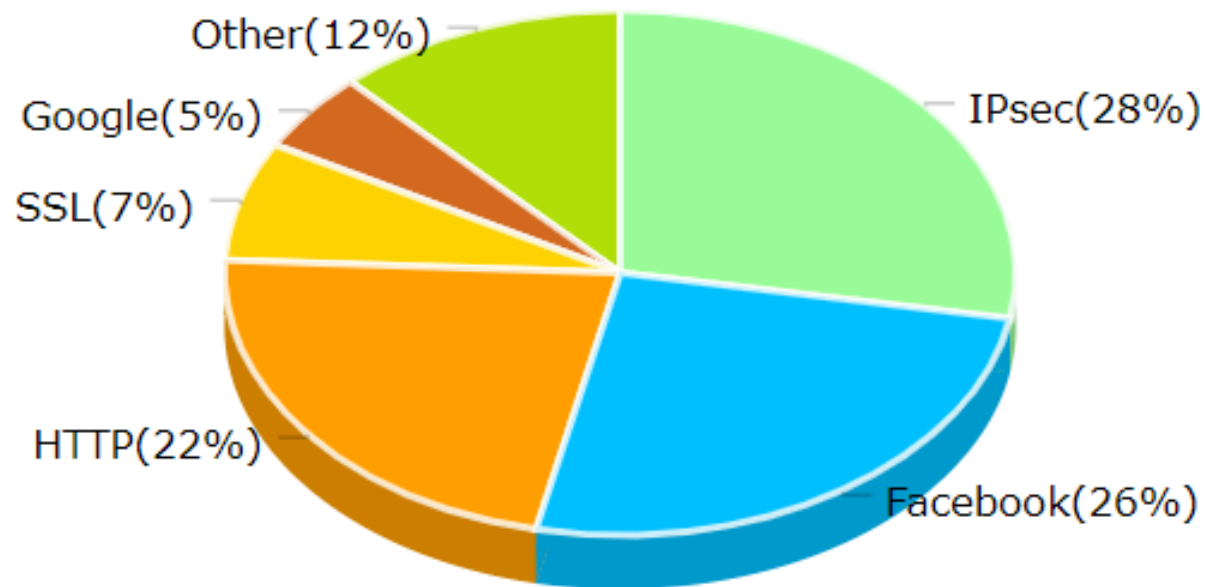
設備顯示於平面圖上，清楚得知實際位置。



第七層前五名分析

第七層服務前五名分析，針對整體流量進行第七層分析，並以圓餅圖呈現。

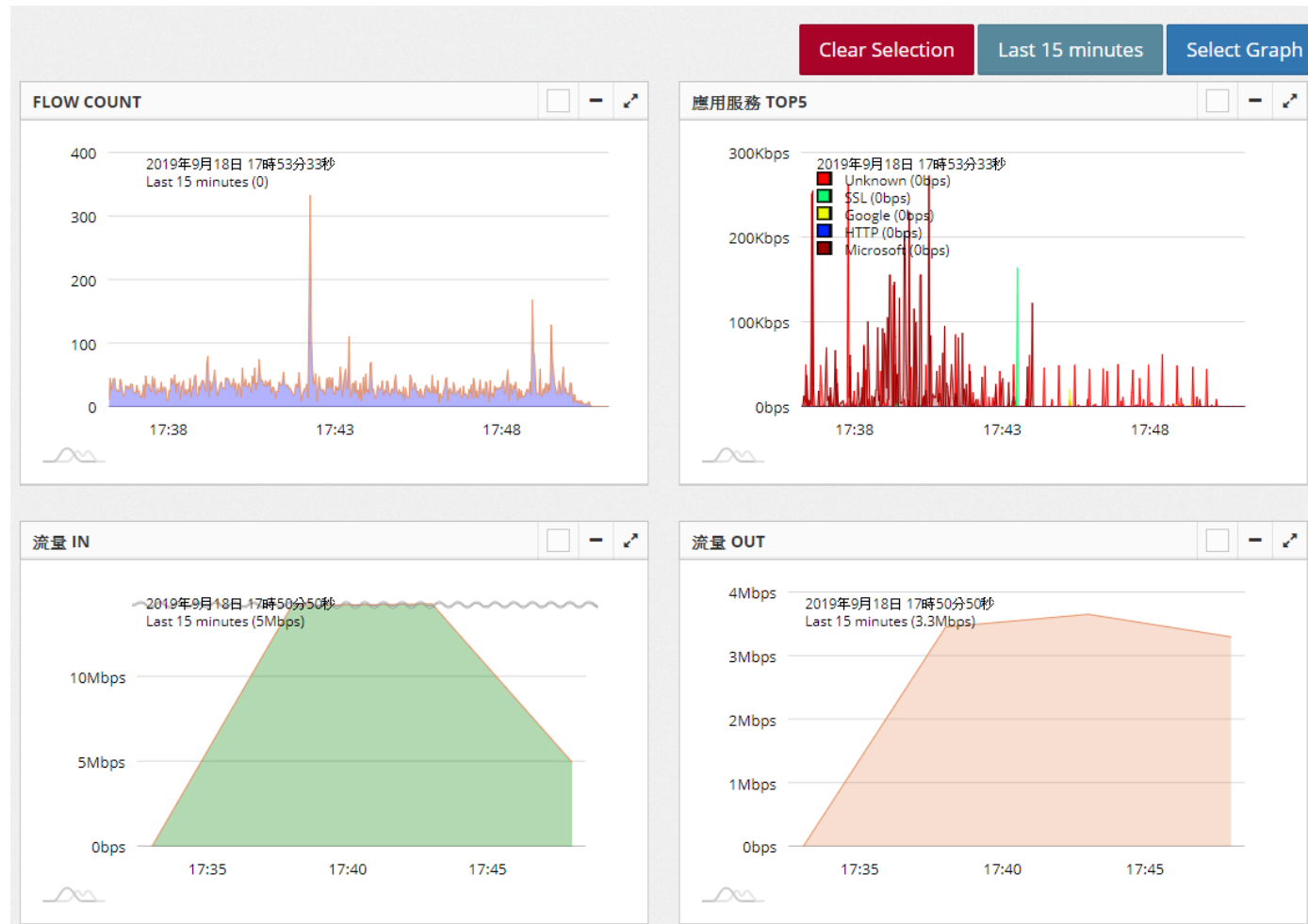
L7 TOP 5 (5分鐘)



Flow分析

綜觀 → Flow分析

本校IP流量圖表分析總覽/流量資訊排名/圖表式佔比，圖表可作區間放大。



網路流量

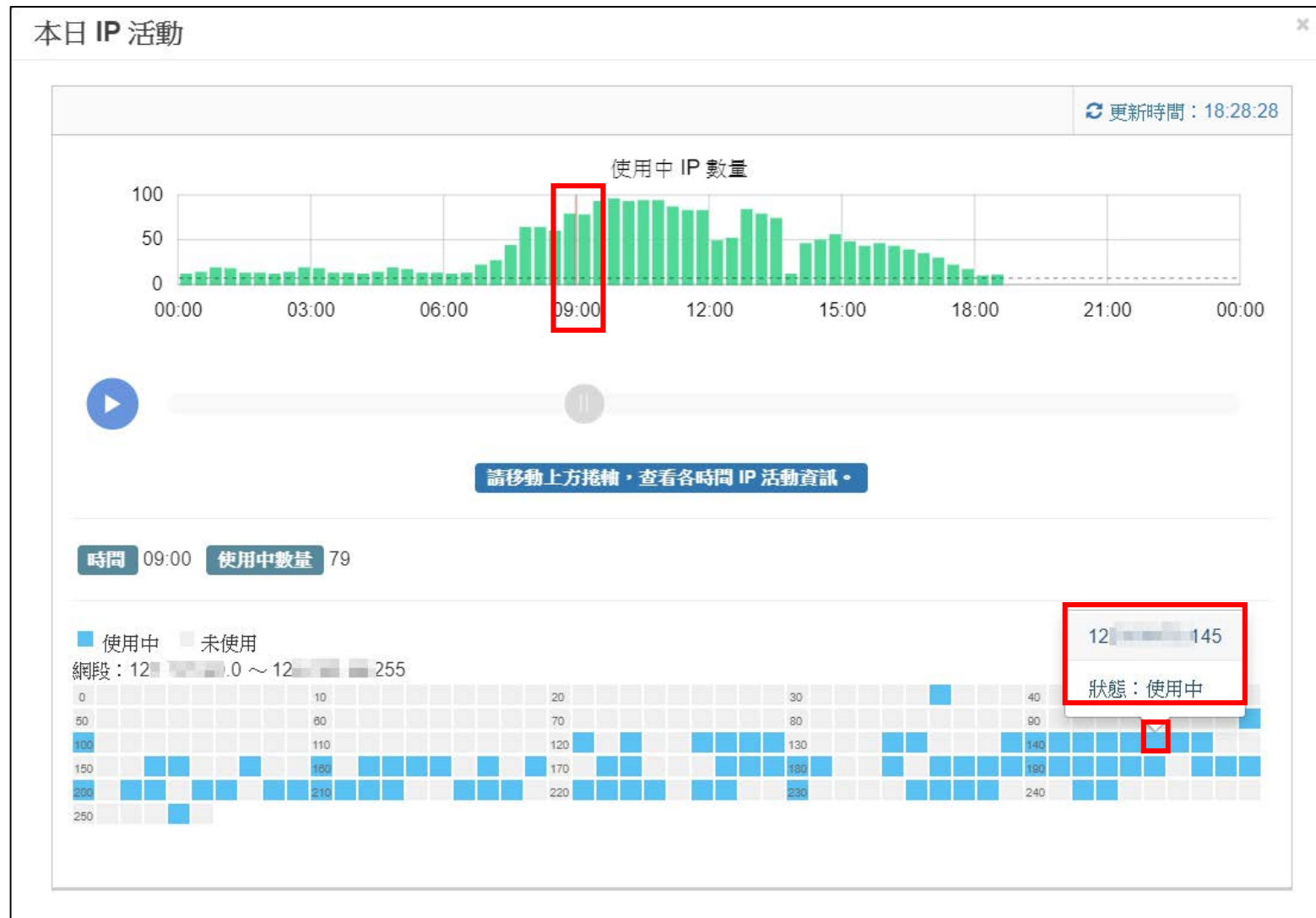
綜觀 → 網路流量

本區顯示L3 up link port的流量圖表(日/月/年)。



IPAM

本日IP活動



IP 資訊

針對單一 IP 分析資料，更可以進階drill down找出與此IP有連線紀錄的Top10 IP。

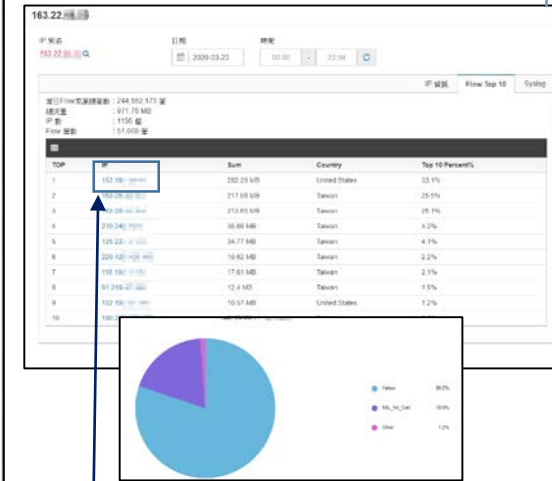
判斷IP危險程度



IP第七層分析

IP MAC
位於交換器埠

進階 drill down 分析關聯IP
IP 流量圖表



服務偵測

系統 → 工具 → 服務偵測

透過智慧網管去抓取偵測對象流量，來反應該服務的速度。





- Monitoring
 - Network Summary
 - Access Points
 - Clients
 - Rogues
 - Access Points
 - Clients
 - Interferers
 - Wireless Dashboard
 - AP Performance
 - Client Performance
 - Best Practices

GENERAL



User Name
Unknown

Host Name
Unknown

MAC Address: ac:15:f4:71:39:96 [Deauthenticate](#)

Uptime: Associated since 18 Days 34 Minutes

SSID: class

AP Name: 3F-MIS_MeetingRoom (Ch 100)

Nearest APs

Device Type: Unclassified

Performance: Signal Strength: -64 dBm Signal Quality: 28 dB Connection Speed: 1300 Mbps Channel Width: 80 MHz

Capabilities: 802.11ac (5GHz) Spatial Stream: 3

Cisco Compatible: Not Supported

Connection Score: 100%

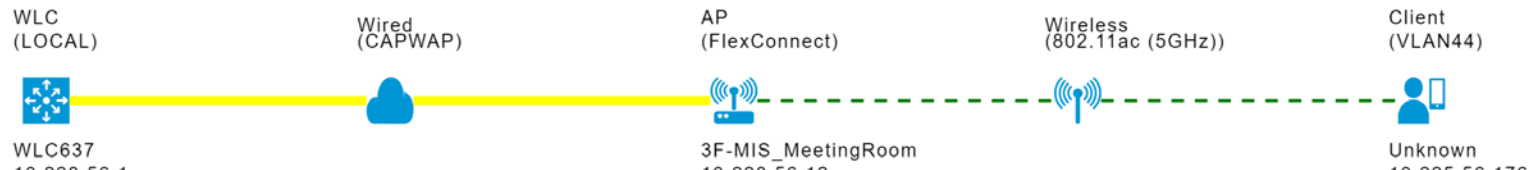
CONNECTIVITY



TOP APPLICATIONS

Name	Usage	% Usage
No Data Available!		

MOBILITY STATE



ACCESS POINT VIEW

- Monitoring
- Network Summary
 - Access Points
 - Clients
 - Rogues
 - Access Points
 - Clients
- Interferers
- Wireless Dashboard
 - AP Performance
 - Client Performance
 - Best Practices

GENERAL



AP Name
3F-MIS_MeetingRoom [↗](#)

Location
default location

MAC Address	a0:b4:39:88:72:68
IP Address	10.228.56.12
CDP / LLDP	3F-Blue_MeetingRoom, GigabitEthernet0
Ethernet Speed	1000 Mbps
Model / Domain	AIR-AP2802I-T-K9 / 802.11bg:-A 802.11a:-T
Power status	Power injector / Full Power
Serial Number	FJC2409M8W3
Groups	AP Group: default-group, Flex Group: default-flex-group
Mode / Sub-mode	FlexConnect / Not Configured
Max Capabilities	802.11n 2.4GHz, 802.11ac 5GHz Spatial Streams : 3 (2.4GHz), 3 (5.0GHz) Max. Data Rate : 217 Mbps(2.4GHz), 2340 Mbps(5.0GHz)
Fabric	Disabled

PERFORMANCE SUMMARY

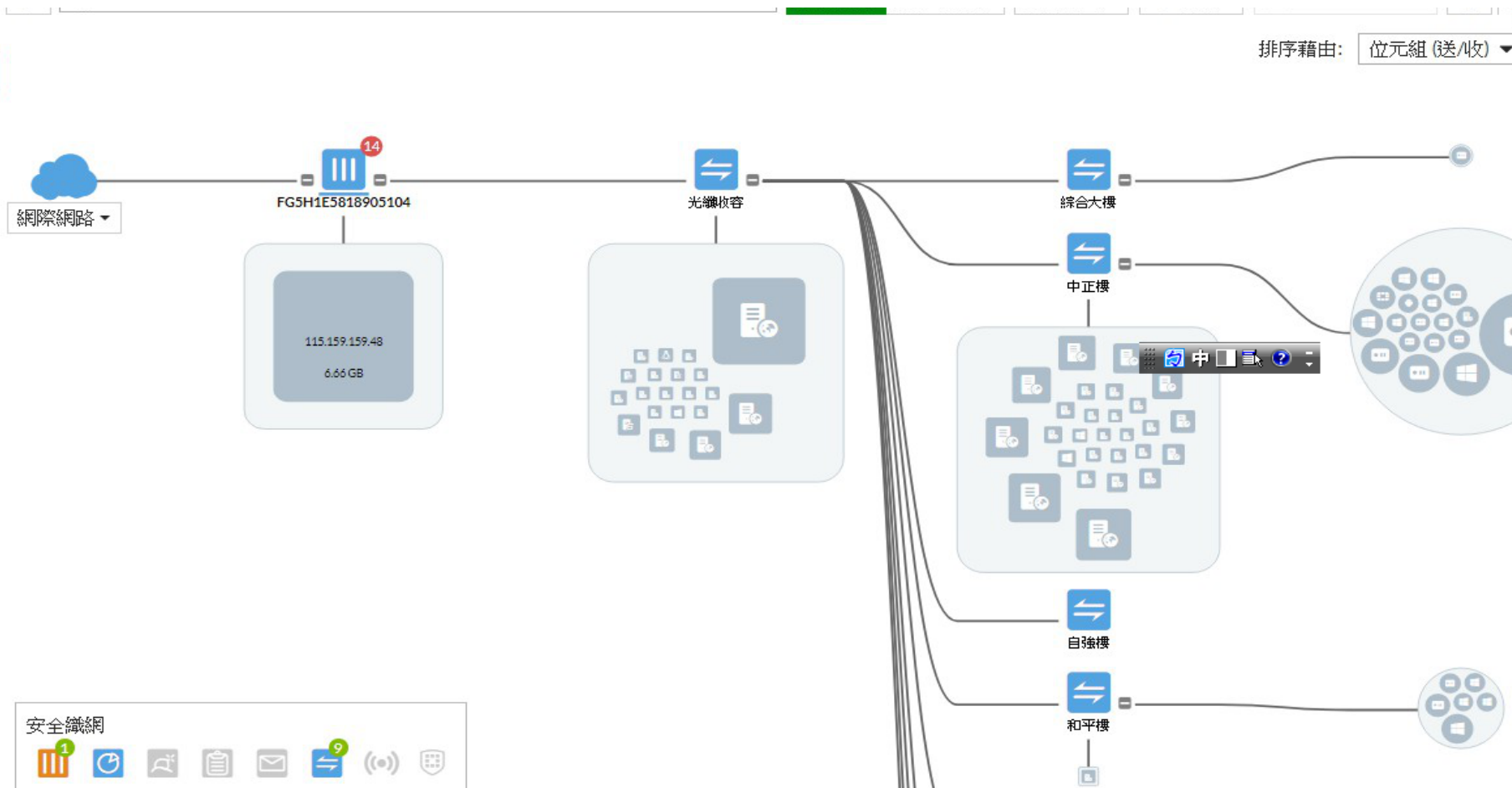
	2.4GHz	5GHz	Remote LAN
Number of clients	0	61	0
Channels	11	(100, 104, 108, 112)	0
Configured Rate	Min: 36 Mbps, Max: 217 Mbps	Min: 36 Mbps, Max: 1300 Mbps	Min: 0 Mbps, Max: 0 Mbps
Usage Traffic	0	96.1 GB	0
Throughput	0	17.2 KB	0
Transmit Power	20 dBm	17 dBm	0 dBm
Noise	Not Available	-96 -97 -97 -97	Not Available
Channel Utilization	0% <input type="text"/>	3% <input type="text"/>	0% <input type="text"/>
Interference	0% <input type="text"/>	0% <input type="text"/>	0% <input type="text"/>
Traffic	0% <input type="text"/>	3% <input type="text"/>	0% <input type="text"/>
Air Quality	-	-	-
Admin Status	Disabled	Enabled	Enabled
Clean Air Status	Down	Down	Not applicable

FORTINET

- 安全鐵網
- 實體拓樸圖
- 邏輯拓樸圖
- 資安評級
- 自動化
- 設置
- Fabric Connectors

- FortiView
- 網路
- 系統管理
- 政策 & 物件
- 資安管理設定
- VPN
- 用戶與設備
- WiFi & Switch 控制器
- 日誌與報表
- 監測

排序藉由: 位元組 (送/收)

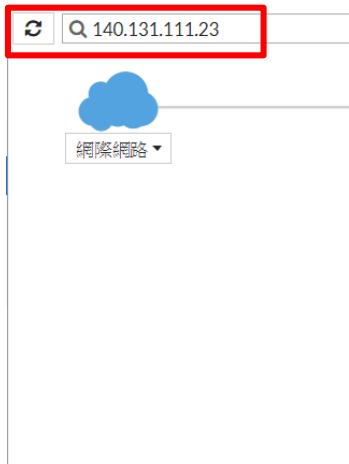


封鎖異常使用者在網路交換器上

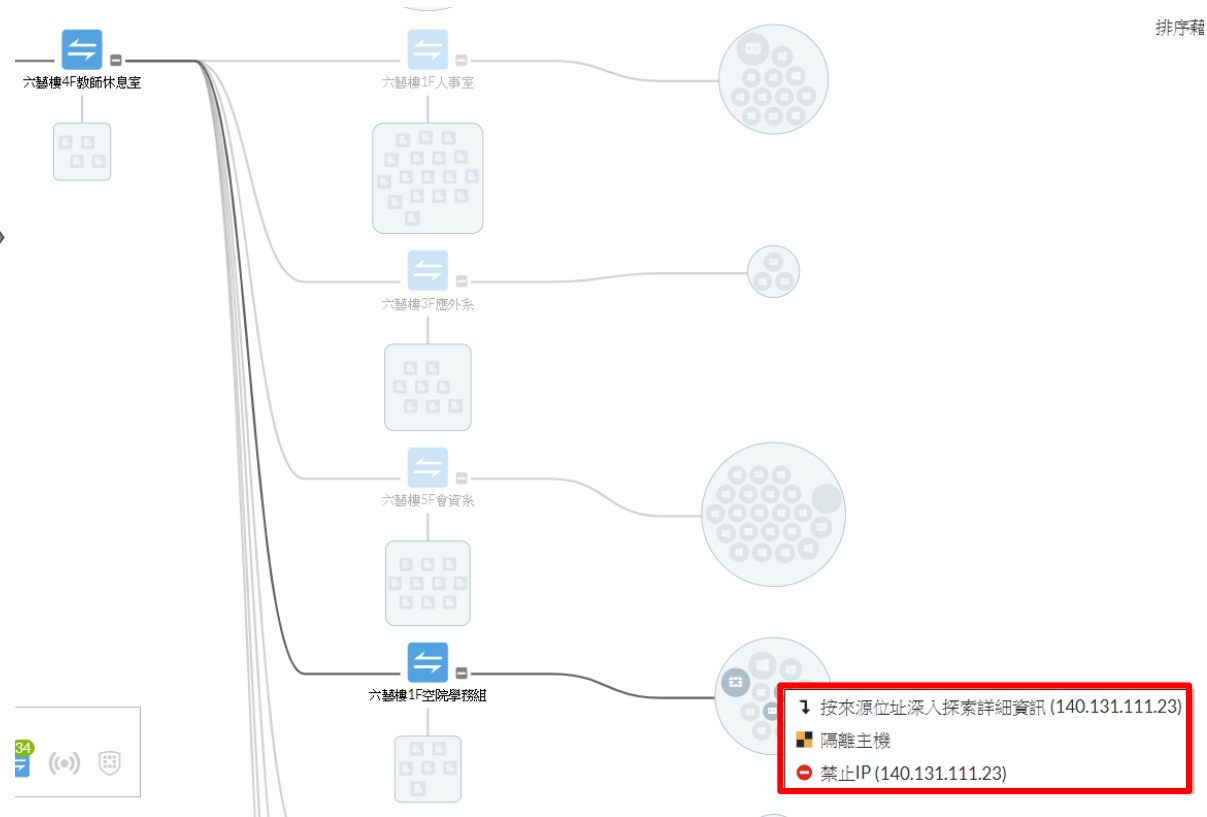
1. 點選實體拓樸圖



2. 輸入要查找IP位置



3. 找到使用者設備裝置後點選滑鼠右鍵進行封鎖



確認來源IP位置在哪個網路交換器埠上

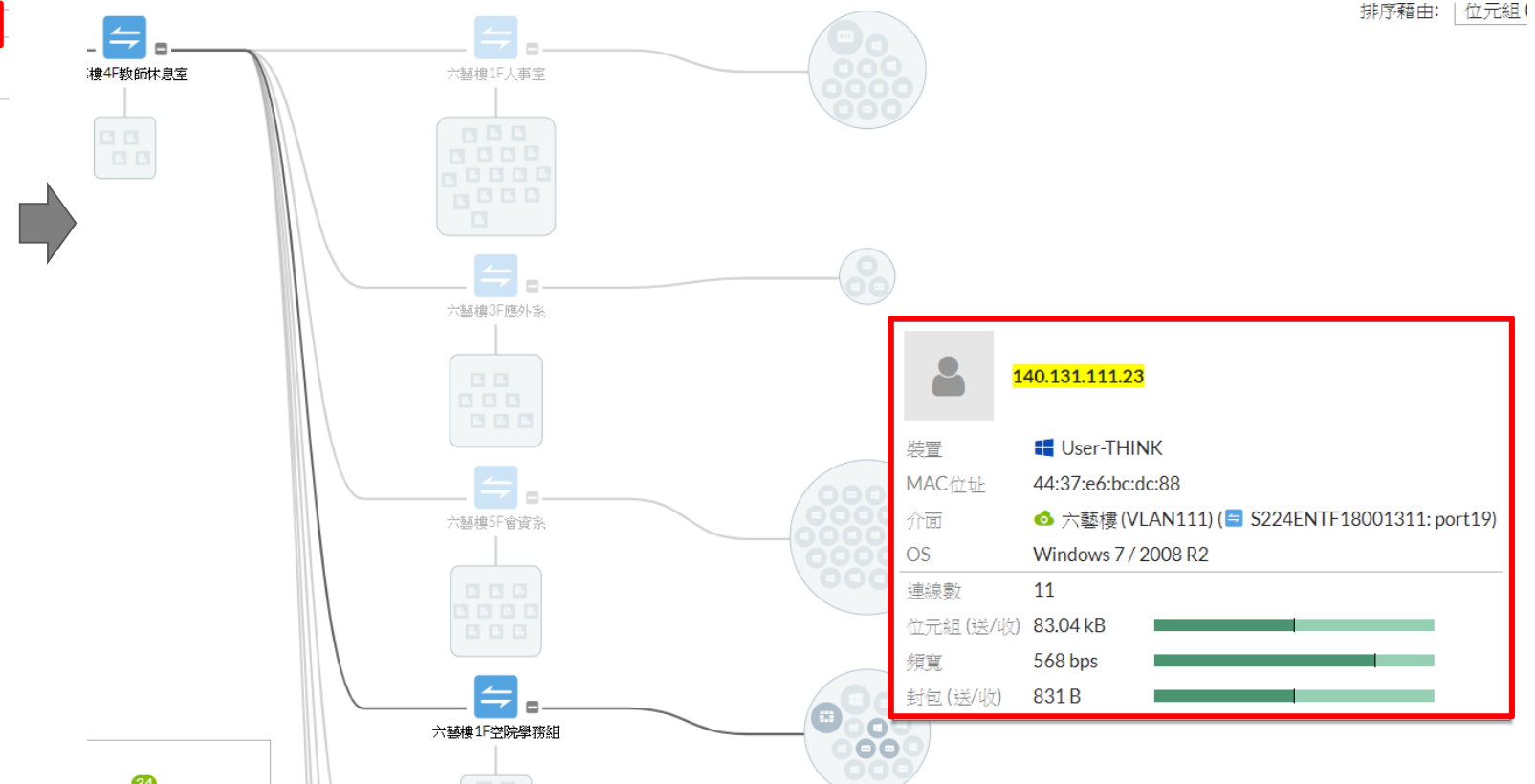
1. 點選實體拓樸圖



2. 輸入要查找IP位置



3. 可呈現這個IP位置完整資訊



智慧網管功能分析

- 智慧網管可以呈現校園網路狀態
- 管理者可以透過警訊通知即時了解可能問題
- 對於使用者應用數據分析可以有初步的了解
- 對於基礎問題排查有基本的助益
- 組長須具備網路基礎相關知識
- 有利於網管工作分工
- 設備妥善率可以提升

相關網路資安證照說明 考試心得分享



資安鑑識調查



資訊安全證照



個資證照



資安職能相關證照



技術檢核相關證照



思科專業證照



思科網路證照



思科筆試認證



封包分析

網路管理建置經驗分享

PRTG NETWORK MONITOR

設計一個手機監控智慧網管

Alfred

Home Devices Libraries Sensors Alarms Maps Reports Logs Tickets Setup New Log Entries 18

Devices Local Probe Custom Sensors Synology

Device Synology

Overview 2 days 30 days 365 days Alarms System Information Log Settings Notification Tr

To see sensor gauges here, please change the priority of one or more sensors to ★★★★★/★★★★★.

Pos	Sensor	Status	Message	Graph	Priority
1.	disk: 0 - disk id	Unknown	No data yet	Response Tim No data	★★★★☆
2.	Table(disk: 1): [tablename] / [rowidentifier]	Unknown	No data yet	disk temperat No data	★★★★☆
3.	Table(disk: 2): [tablename] / [rowidentifier]	Unknown	No data yet	disk temperat No data	★★★★☆
4.	Table(disk: 3): [tablename] / [rowidentifier]	Unknown	No data yet	disk temperat No data	★★★★☆
5.	Table(disksmart: 2): [tablename] / [rowidentifier]	Unknown	No data yet	disk smart att No data	★★★★☆
6.	Table(disksmart: 21): [tablename] / [rowidentifier]	Unknown	No data yet	disk smart att No data	★★★★☆

1 to 6 of 6

Recommended Sensors


Priority	Sensors	Total Sensors	Links
★★★★★	1xPing	1	Add These Sensors
★★★★☆	4xSNMP Traffic, 1xSNMP Disk Free, 1xCPU Load, 2xSNMP Memory, 1xRDP (Remote ...	9	Add These Sensors


[Recommend Now](#)


What is this?
PRTG can inspect your devices to recommend useful sensor types. Add these sensors to get a much better and more detailed picture about the status of this device in the future.


手機監控


Alfred 2021.03.15 下午 10:56 >  


 DNS: dns153
✓ 2


 DNS: dns154
✓ 2

 forti3950b-a
✓ 4

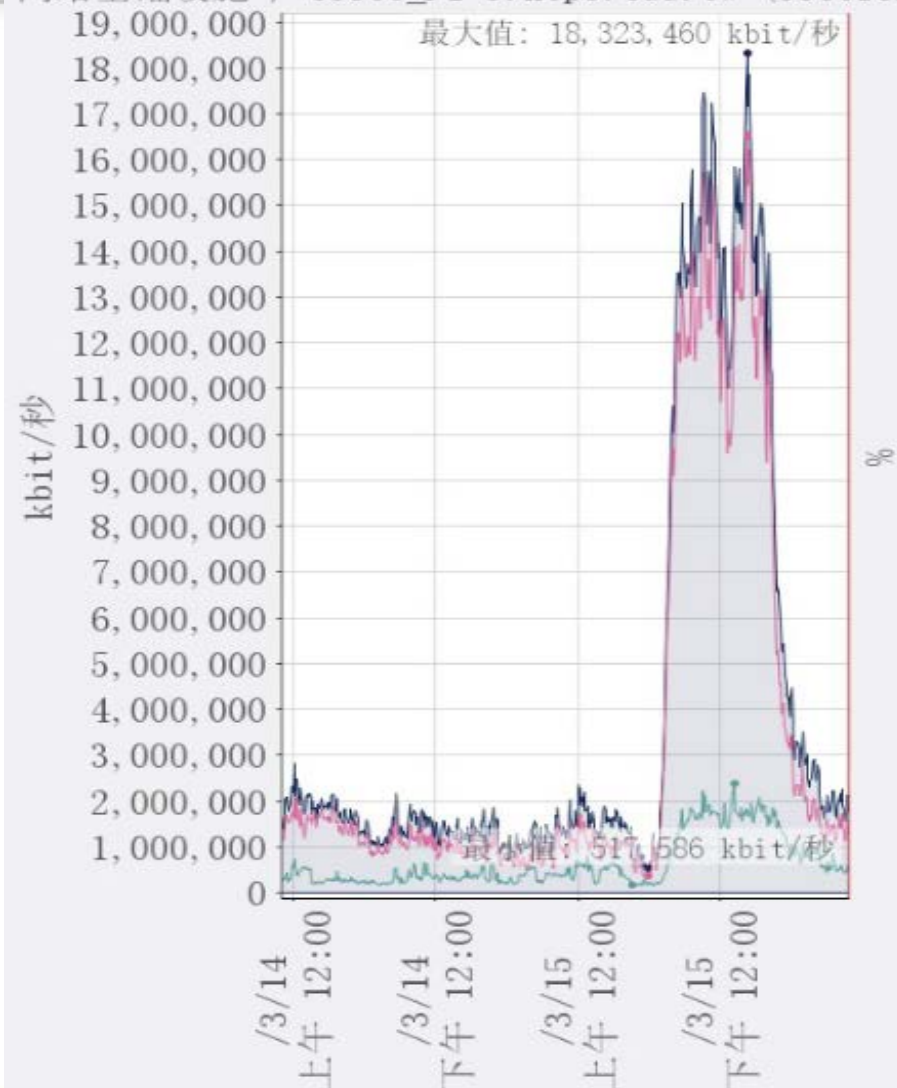
 forti3950b-b
✓ 2

 C9300_F1-3.ntpc.edu.tw (9300...
✓ 24

 C9300-NCCU
✓ 15

 NX_B (n7k-b) [Cisco Device]
✓ 16

传感器: (115) Port-channel11 Traffic (2 天)
网络基础设施 / C9300_F1-3.ntpc.edu.tw (9300school)...



✓ (101) TenGigabitEthernet2/1/1 Traffic
确定
Last Value: 575,332 kbit/秒

✓ (102) TenGigabitEthernet2/1/2 Traffic
确定
Last Value: 304,412 kbit/秒

✓ (103) TenGigabitEthernet2/1/3 Traffic
确定
Last Value: 284,344 kbit/秒

✓ (115) Port-channel11 Traffic
确定
Last Value: 1,738,718 kbit/秒

下載 www.paessler.com

← → ↻ https://www.paessler.com



PAESSLER

PRODUCT ▾

PRICING

LEARN ▾

SUPPORT ▾

Work smarter, start monitoring

PRTG monitors your whole IT infrastructure 24/7 and alerts you to problems before users even notice. Find out more about the monitoring software that helps system administrators work smarter, faster, better.



[DOWNLOAD FREE TRIAL](#)

[DOWNLOAD FREWARE](#)

PRTG

Network Monitoring Software
Version 18.4.47.1962 (December 11th, 2018)

Languages

English, German, Spanish, French, Portuguese, Dutch, Russian, Japanese, and Simplified Chinese

Unified Monitoring

Network devices, bandwidth, servers, applications, virtual environments, remote systems, IoT, and more

[Home](#) > [Downloads](#) > [PRTG Download](#) - Thanks for downloading!

PRTG download - Thanks for downloading!

Your PRTG License Name

prtgtrial

Your PRTG License Key

000014-164KFM-8FFZ8K-NJ5QAF-
QNZNMH-J75U6E-JBA0D3-NH6MMY-
XZ0ZQC-ZEB0P1

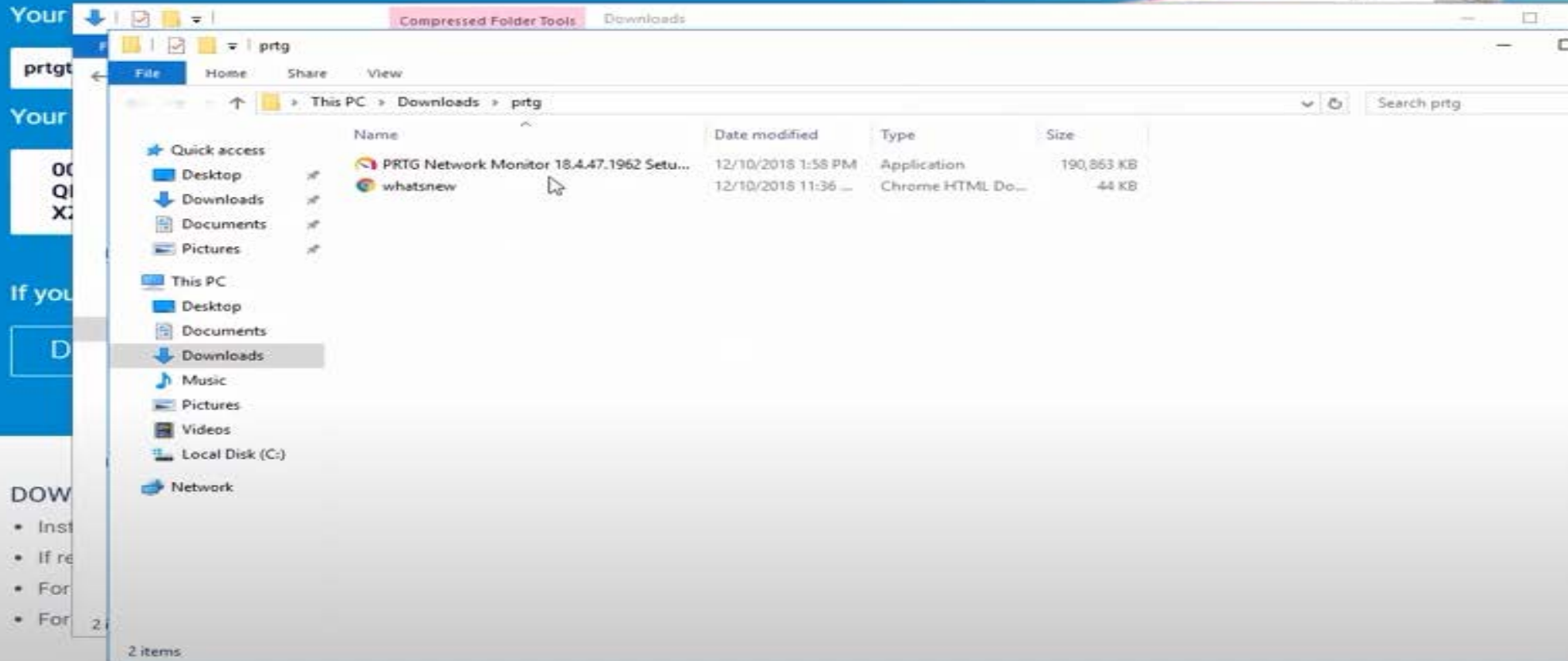
If your PRTG download didn't start automatically:

[DOWNLOAD PRTG](#)



Home > Downloads > PRTG Download - Thanks for downloading!

PRTG download - Thanks for downloading!



File Explorer window showing the Downloads folder. The subfolder 'prtg' contains the following files:

Name	Date modified	Type	Size
PRTG Network Monitor 18.4.47.1962 Setu...	12/10/2018 1:58 PM	Application	190,853 KB
whatsnew	12/10/2018 11:36 ...	Chrome HTML Do...	44 KB

E-mail and license key

The screenshot shows the Paessler website's PRTG download page. The page has a blue header with the Paessler logo and navigation links. The main content area is blue and features the text "PRTG download - Thanks for downloading!". Below this, there are two input fields: "Your PRTG License Name" with the value "prtgttrial" and "Your PRTG License Key" with the value "000014-164KFM-8FFZ8K-NJ5QAF-QNZNMH-J75U6E-JBA0D3-NH6MMY-XZ0ZQC-ZEB0P1". A button labeled "DOWNLOAD PRTG" is visible. An inset window titled "Setup - PRTG Network Monitor" is overlaid on the page. This window has a "Your Email Address" field and a "Your License Key" field. The license key field is pre-filled with the same key as on the website. The window also contains text about notifications and a privacy policy link.

DOWNLOAD PRTG AND GET STARTED IN A FEW MINUTES

- Install PRTG Network Monitor in your network and enter your license key. Watch [this video](#) how to do it.
- If required, all your settings and data from the trial phase can be kept in your commercial edition.
- For [technical support](#) check our manual and Knowledge Base or open a support ticket.
- For questions regarding purchasing and available licenses, please contact sales@paessler.com.

DOWNLOAD PRTG AND GET STARTED IN A FEW MINUTES

- Install PRTG Network Monitor in your network and enter your license key. Watch [this video](#) how to do it.
- If required, all your settings and data from the trial phase can be kept in your commercial edition.
- For [technical support](#) check our manual and Knowledge Base or open a support ticket.
- For questions regarding purchasing and available licenses, please contact sales@paessler.com.

進入網頁設定(管理) 程式集

The screenshot shows the PRTG Network Monitor web interface. The top navigation bar includes Home, Devices, Libraries, Sensors, Alarms, Maps, Reports, Logs, Tickets, and Setup. The main content area is titled 'Group Root' and shows an 'Overview' of a 'Local Probe' which is 'Disconnected'. Below it, a 'Probe Device' is listed with sensors for Core Health, Probe Health (red), System Health, Disk Free, Common SaaS, and XenServer PV. A '1st group' is also visible. A central orange notification box reads: 'Congratulations! PRTG is about to scan your network. You will see all your devices soon. For the next 30 days, we have unlocked unlimited sensors for you. Afterwards you can use 100 sensors for free forever.' Buttons for 'OK' and 'Skip introduction' are at the bottom of the box. The bottom of the page has a 'Help' icon and 'Remote Site' text.

The screenshot shows a Windows taskbar with several application icons. From top to bottom, the icons are: AnyDesk, Google Chrome, Notepad++, and PRTG Network Monitor. A context menu is open over the PRTG Network Monitor icon, displaying the following options: 'PRTG Network Monitor (Default Browser)', 'PRTG Network Monitor (Default... New', 'PRTG Network Monitor on the W... New', and 'Uninstall PRTG Network Monitor New'. A mouse cursor is pointing at the 'PRTG Network Monitor (Default... New' option. The taskbar also shows a search icon and a 'Remote Site' icon.

PRTG Monitor 後台，新密碼!(很重要)



PRTG Network Monitor - PRTG Administration Tool

PAESSLER PRTG Network Monitor

核心连接的探针设置 用于监控的探针设置 服务启动/停止 日志和信息
PRTG Web 服务器 PRTG 核心服务器 群集 管理员

PRTG 系统管理员用户帐户的登录凭据

电子邮件地址:

登录名:

密码:

PRTG Network Monitor - PRTG Administration Tool

PAESSLER PRTG Network Monitor

Probe Settings for Core Connection Probe Settings for Monitoring Service Start/Stop Logs and Info
Web Server Core Server Cluster Administrator

Select TCP Port for PRTG's Web Server

Secure HTTPS Server (standard port 443, recommended, mandatory for Internet access)

Insecure HTTP server (standard port 80, not recommended)

Expert configuration

Select IP Address for PRTG's Web Server

Localhost: Use 127.0.0.1 (PRTG will not be accessible from other computers)

All IPs: Use all IPs available on this computer (Note: Selected TCP port must be available on all IPs)

Specify IPs:

Select System Language

English

Settings 设置

设备

群组 Root

- Root
 - 本地探测?
 - Probe Device Core H... 2 传感器
 - 网络发现
 - 网络基础设施
 - DNS: dns153 PING DNS
 - DNS: dns154 PING DNS
 - forti3950b-a (003) HA-120 Traffic (004) HA-64 Traffic (379) TO_N7K_A Traffic (380) To_N7K_A Traffic
 - forti3950b-b (379) TO_N7K_A Traffic (380) To_N7K_A Traffic
 - C9300_F1-3.ntpc.edu.tw (9300scho... (036) TopGigabitEth... (037) TopGigabitEth... (038) TopGigabitEth... (096) GigabitEth... (101) TopGigabitEth... (102) TopGigabitEth... (103) TopGigabitEth... (115) Port-channel11 Traffic (502) To_2050R_A_E1 (503) To_2050R_B_E1 (504) To_C3750-CHT_A Traffic (031) GigabitEth... (036) TopGigabitEth... (037) TopGigabitEth... (038) TopGigabitEth... (040) TopGigabitEth... (041) TopGigabitEth... (042) TopGigabitEth... (119) To_C3750-CHT_A Traffic System Health CPU System Health CPU System Health CPU System Health CPU System Health CPU
 - C9300-NCCU (060) TopGigabitEth... (142) Port-channel18 Traffic Ping 1 正常运行时间 1 (060) TopGigabitEth... (062) N7K-B-ae2 Traffic (066) N7K-B-ae20 Traffic (126) TopGigabitEth... (128) N7K-B-ae2 Traffic System Health CPU (065) TopGigabitEth... (067) TopGigabitEth... (129) SRX-ae4 Traffic (131) TopGigabitEth... (132) N7K-B-ae20 Traffic
 - NX_B (n7k-b) [Cisco Device] (151060492) Vlan12 Traffic (151060502) Vlan22 Traffic (151060512) Vlan22 Traffic (151060522) Vlan42 Traffic (369098758) port_channel7 (369098771) port_channel20 (369098783) port_channel22 (369098784) port_channel22 (369098785) port_channel24 (369099192) port_channel44 (369102845) port... (369102846) port... (369102847) port... (369102847) port... System Health CPU System Health Memory
 - Internet HTTP
 - DNS: 203.72.153.153 Ping

SNMP

Credentials for VMware/XenServer

User 

Password 

VMware Protocol 

HTTPS (recommended)

HTTP

Session Pool 

Reuse session for multiple scans (recommended)

Create a new session for each scan

Credentials for SNMP Devices

SNMP Version 

v1

v2c (recommended)

v3

Community String 

public

SNMP Port 

161

SNMP Timeout (Sec.) 

5

Due to internal limitations, you can only monitor a limited number of sensors per second when using SNMP v3. The main limiting factor is CPU power. Currently, FRTG is able to handle roughly 40 requests per second and computer core, depending on your system. This means that you can run about 5,000 SNMP v3 sensors with a 60-second scanning interval on a computer with two cores, and around 10,000 sensors with a 60-second interval on a system with four cores. If you experience an increased Interval Delay or Open Requests reading of the Probe Health sensor, you need to distribute the load over multiple probes. SNMP v1 and v2 do not have this limitation.

面板介紹

1 93 6 (共 100) S M L XL 设置 刷新

搜索...

+ 添加传感器

名称	流量
C9300_F1-3.ntpc.edu.tw (9300school) [Cisco Device Cisco IOS]	
(036) TenGigabitEthernet1/1/1 Traffic	303,933 kbit/秒
(037) TenGigabitEthernet1/1/2 Traffic	283,515 kbit/秒
(038) TenGigabitEthernet1/1/3 Traffic	133,974 kbit/秒
(096) GigabitEthernet2/0/48 Traffic	138,665 kbit/秒
(101) TenGigabitEthernet2/1/1 Traffic	352,281 kbit/秒
(102) TenGigabitEthernet2/1/2 Traffic	251,524 kbit/秒
(103) TenGigabitEthernet2/1/3 Traffic	545,065 kbit/秒
(115) Port-channel11 Traffic	1,305,734 kbit/秒
(502) To_3950B_A_F1-1 Traffic	483,810 kbit/秒
(503) To_3950B_B_F1-2 Traffic	698,083 kbit/秒
(504) To_C3750-CHT-4 Traffic	167,042 kbit/秒
(031) GigabitEthernet1/0/24 Traffic	29,076 kbit/秒
(036) TenGigabitEthernet1/1/1 Traffic	304,034 kbit/秒
(037) TenGigabitEthernet1/1/2 Traffic	288,949 kbit/秒
(038) TenGigabitEthernet1/1/3 Traffic	135,126 kbit/秒
(040) TenGigabitEthernet1/1/5 Traffic	298,986 kbit/秒
(041) TenGigabitEthernet1/1/6 Traffic	1,052,833 kbit/秒
(042) TenGigabitEthernet1/1/7 Traffic	664,865 kbit/秒
(119) To_C3750-CHT-4 Traffic	170,375 kbit/秒
Custom Health CPU	1%

Add device

The image shows a web-based network management interface. The top navigation bar includes 'Home', 'Devices', 'Libraries', 'Sensors', 'Alarms', 'Maps', 'Reports', 'Logs', 'Tickets', and 'Setup'. The 'Devices' menu is open, showing options: 'All', 'Favorite Devices', 'Device List', 'Dependencies', 'Add Group', 'Add Auto-Discovery Group', and 'Add Device'. The main content area displays a tree view of network infrastructure with various sensor status indicators (e.g., System health, Disk Free, Common SaaS, Business Proc., Syslog Receiver) and a search bar.

127.0.0.1/group.htm?id=0&tabid=1

Home Devices Libraries Sensors Alarms Maps Reports Logs Tickets Setup

Devices

- All
- Favorite Devices
- Device List
- Dependencies
- Add Group
- Add Auto-Discovery Group
- Add Device

127.0.0.1/group.htm?id=0&tabid=1

Home Devices Libraries Sensors Alarms Maps Reports Logs Tickets Setup

Devices

- All
- Favorite Devices
- Device List
- Dependencies
- Add Group
- Add Auto-Discovery Group
- Add Device

Group Root

30 days 365 days Alarms Log Management Settings Notifications

Search...

System health 100% Disk Free 36% Common SaaS 100% Business Proc. Over Syslog Receiver 0 #/s Add Sensor

Network Discovery

- Network Infrastructure
 - 5 Sems... 253 Se... 12 Sen...
- Virtual Systems
 - 11 Sen...
- Linux / MacOS / Unix
 - PING 5 Sems... 24 Sen... 223 Se... 3 Sems...

Custom Sensors

- Burp
 - SNMP System... 8 # 76 % Ping 0 mac Table/naa disk... 1,966 # Add Sensor
- Synology
 - Add Sensor Run Auto-Discovery

添加新设备

必要时定义设备名称、地址以及针对自动发现、凭据设置 (Windows、Linux、VMware/XEN 和 SNMP) 的选项。

PRTG 手册：添加设备

设备名称和地址

设备名称 ⓘ

Device

IP 版本 ⓘ

使用 IPv4 连接

使用 IPv6 连接

IPv4 地址/DNS 名称 ⓘ

需要此字段。

标签 ⓘ



设备图标 ⓘ



取消

确定

SNMP 设备凭据

继承自 网络发现 (SNMP 版本: V2, SNMP 端口: 161, 超时 (秒): 5 秒)

SNMP 版本 ⓘ

v1

v2c (推荐)

v3

社区字符串 (Community String) ⓘ

public

SNMP 端口 ⓘ

161

超时 (秒) ⓘ

5

数据库管理系统的凭据

继承自 网络发现 (超时 (秒): 60 秒)

AWS 的凭据

继承自 网络发现

Credentials for Dell EMC

取消

确定

Add sensor

The screenshot shows the PRTG web interface. On the left, a tree view shows the hierarchy: Home > Devices > Group Root > Local Probe > Synology. The 'Add Sensor' button is highlighted under the Synology device. A dropdown menu is open, showing options like 'Add Group', 'Add Auto-Discovery Group', and 'Add Device'. The main panel shows a list of sensors for the Synology device, including 'System Health', 'Disk Free', 'Common Sea...', and 'Business Proc...'. A '30 days' filter is applied. The 'Add Sensor' button is also visible in the bottom right of the sensor list.

The screenshot shows the 'Add Sensor to Device Synology' configuration page. The page is titled 'Add Sensor to Device Synology' and has a blue header. Below the header, there are three sections: 'Monitor What?', 'Target System Type?', and 'Technology Used?'. Each section contains radio buttons for selecting monitoring options. The 'Monitor What?' section includes: Availability/Uptime, CPU Usage, Hardware Parameters, Bandwidth/Traffic, Disk Usage, Network Infrastructure, Speed/Performance, Memory Usage, and Custom Sensors. The 'Target System Type?' section includes: Windows, Linux/macOS, Virtualization OS, Storage and File Server, Email Server, and Database. The 'Technology Used?' section includes: Ping, HTTP, SNMP, SSH, WMI, Packet Sniffing, Performance Counters, and NetFlow, sFlow. Below these sections, there is a search bar with the text 'Search [Type to search name or description]' and '257 Matching Sensor Types'. Underneath, there is a section titled 'Most Used Sensor Types' with a grid of sensor cards. Each card includes a title, a brief description, and a small bar chart. The cards shown are: DNS, Ping, SNMP CPU Load, SNMP Custom, SNMP Disk Free, SNMP Memory, SNMP System Uptime, and SNMP Traffic. At the bottom, there is a section titled 'Matching Sensor Types'.

监控什么?

可用性/正常运行时间 CPU 使用情况 硬件参数

带宽/流量 磁盘使用情况 网络基础设施

速度/性能 内存使用情况 自定义传感器

目标系统类型?

Windows 存储和文件服务器 数据库

Linux/macOS 电子邮件服务器 云服务

虚拟化操作系统

使用的技术?

Ping HTTP PowerS

SNMP SSH 推送消息

WMI 数据包嗅探 PRTG C

性能计数器 xFlow

[← 取消传感器创建](#)

搜索

284 正在匹配传感器类型

最常用的传感器类型

AWS Cost ?

Monitors the costs of an AWS account by reading its data from the AWS Cost Explorer API

Needs valid credentials for AWS in the settings of the parent device or group. Every sensor scan generates API call costs in your AWS account.

+

DNS ?

监控 DNS 服务器、解析域名并将其与 IP 地址进行比较

将此传感器添加到 DNS 服务运行的设备上。

+

HTTP ?

使用 HTTP 监控 Web 服务器

显示网站或特定网站元素是否可达。

+

Microsoft Azure Subscription Cost BETA ?

Monitors the cost in a Microsoft Azure subscription

Requires valid Azure AD credentials in the settings of the parent device or group. Make sure that you assigned the correct permissions and roles in your Microsoft Azure subscription.

+

MQTT 往返 ?

监控 MQTT 代理 (服务器) 的可用性、连接时间, 以及数据包的往返时间。PRTG 将作为发布和订阅客户端连接到代理, 并使用预定义主题发送数据包。

需要在父设备中定义的有效 MQTT 凭据。

+

NetApp 卷 BETA

使用 SOAP 监控 NetApp 存储系统的卷

在探针系统上需要 .NET Framework 4.0 或更高版本。在 ONTAP 版本 9.0 及更高版本上需要。

+

Ping ?

通过 PING 操作监控连接性

PING 请求用于检查设备是否可以通过网络抵达。

+

POP3 ?

使用 POP3 监控电子邮件服务器

显示服务器的响应时间。

+

SNMP 流量 ?

监控在使用 SNMP 的服务器、个人计算机、交换机等设备上的带宽与流量

要从探针设备 (本地主机, 127.0.0.1 或 ::1) 查询数据, 请将此设备添加到您网络中具有该 IP 地址的 PRTG, 并在此设备上创建传感器。

+

设备
群组 Root

概述 2天 30天 365天 警报 日志 管理 设置 通知触发器 备注

W 1 ✓ 97 U 2 (共 100) S M L XL 搜索...

Root		
本地探?		
Probe Device	W Core H... ✓ 2 传感器	
网络发现		
网络基础设施		
DNS: dns153		
PING	✓	1 毫秒
DNS	✓	6 毫秒
+ 添加传感器		
DNS: dns154		
PING	✓	4 毫秒
DNS	✓	5 毫秒
+ 添加传感器		
forti3950b-a		
(003) HA-120 Traffic	✓	23,090 kbit/秒
(004) HA-64 Traffic	✓	2.16 kbit/秒
(379) TO_N7K_A Traffic	✓	2,366,909 kbit/秒
(380) To_New_Switch Traffic	✓	2,283,062 kbit/秒
+ 添加传感器		
forti3950b-b		
(379) TO_N7K_A Traffic	✓	2,567,220 kbit/秒
(380) To_New_Switch Traffic	✓	2,510,121 kbit/秒
+ 添加传感器		
C9300_F1-3.ntpc.edu.tw (9300school) [Cisco Device Cisco IOS]		
(036) TenGigabitEthernet1/1/1 Traffic	✓	1,813,333 kbit/秒

NEED SOME TECHNICAL ADVICE

Not sure how to make this PRTG, YOUR PRTG?

Ask the team >>

状态: 确定
默认时间间隔: 60 seconds
ID: #0

+ 添加传感器

