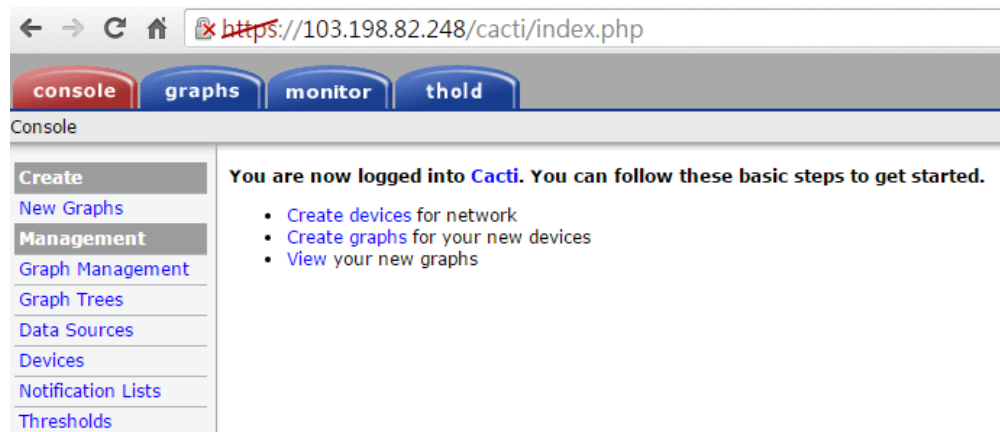
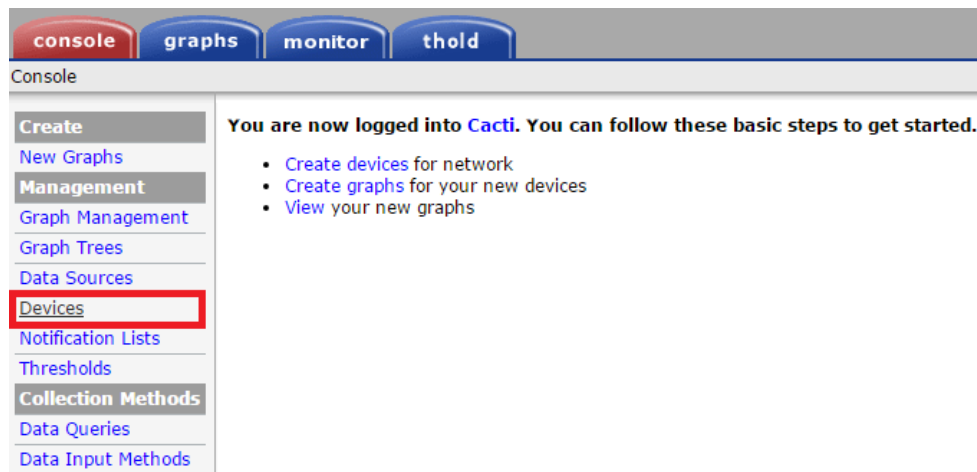


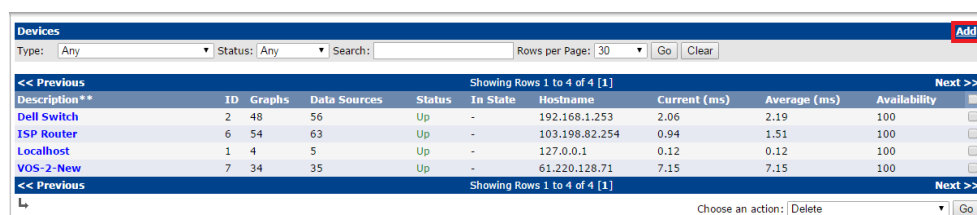
1. 登入 <https://103.198.82.248/cacti>



2. 一開始都在 "console" 模組下，點選 "Devices" 進行新增設備



3. 點選 "Add" 開始新增設備



4. 分別在以下欄位輸入相關資料

Description：設備名稱

Hostname：設備 IP 位址

Host Template：設備樣板，因 VOS 為 Linux 系統，所以在此選取 “Local Linux Machine”，也可選預設值的 “None”

Thold Up/Down Email Notification：設備斷線或關機等異常現象發生時，是否要通知系統管理者

Notification List：告警通知列表(下面會說明設定步驟)

Monitor Host：是否要由 “monitor” 模組來監視該設備的連線狀態

Down Host Message：當機時所要呈現的訊息

5. 這邊大致上就使用預設值，除非在安裝 Cacti Server 時的設定參數有自行定義

SNMP Version：這邊是使用 Version 2

SNMP Community：須與 Cacti Server 下的 snmpd.conf 設定一致，預設是 public

SNMP Port：預設是 161

6. 以上設定好，就可按 “Create”



Additional Options

Notes
Enter notes to this host.

Cancel Create

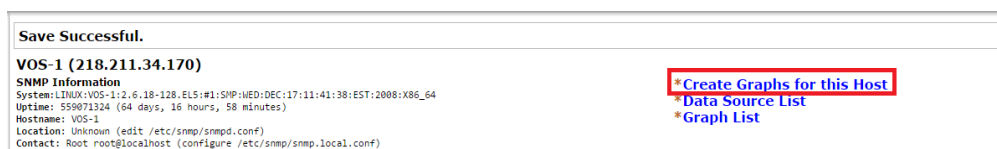
7. 以下呈現的圖形樣板是根據之前選取的 “Host Template” 而來，如果選擇 “None”，所欲呈現的圖形樣板則由使用者經 “Add Graph Template” 自行選取

Associated Graph Templates	
Graph Template Name	Status
1) Linux - Memory Usage	Not Being Graphed
2) Unix - Load Average	Not Being Graphed
3) Unix - Logged in Users	Not Being Graphed
4) Unix - Processes	Not Being Graphed
Add Graph Template: Cisco - CPU Usage	
Add	

8. 這邊則新增 3 個 SNMP 的 Data Query，最後按 “save”

Associated Data Queries			
Data Query Name	Debugging	Re-Index Method	Status
1) SNMP - Get Mounted Partitions	(Verbose Query)	Uptime Goes Backwards	Success [24 Items, 8 Rows]
2) SNMP - Get Processor Information	(Verbose Query)	Uptime Goes Backwards	Success [8 Items, 8 Rows]
3) SNMP - Interface Statistics	(Verbose Query)	Uptime Goes Backwards	Success [39 Items, 4 Rows]
4) Unix - Get Mounted Partitions	(Verbose Query)	Uptime Goes Backwards	Success [4 Items, 2 Rows]
Add Data Query: Karinet - Wireless Bridge Statistics			
Re-Index Method: Uptime Goes Backwards			
Add			
Return Save			

9. 選取 “Create Graphs for this Host”



Save Successful.

VOS-1 (218.211.34.170)

SNMP Information

System: LINUX:VOS-1:2.6.18-128.EL5:#1:SNMP:MED:DEC:17:11:41:38:EST:2008:X86_64

Uptime: 559071324 (64 days, 16 hours, 58 minutes)

Hostname: VOS-1

Location: Unknown (edit /etc/snmp/snmpd.conf)

Contact: Root root@localhost (configure /etc/snmp/snmp.local.conf)

*Create Graphs for this Host

*Data Source List

*Graph List

10. 以下開始是選擇要產生的圖形樣板，這些樣板都是之前設定所產生，在此都是全選，最後再按 “Create”



Graph Templates

Graph Template Name

Create: Linux - Memory Usage

Create: Unix - Load Average

Create: Unix - Logged in Users

Create: Unix - Processes

Create: (Select a graph type to create)

Create

Data Query [SNMP - Get Mounted Partitions]

Index	Description	Storage Allocation Units
1	Physical memory	1024 Bytes
3	Virtual memory	1024 Bytes
6	Memory buffers	1024 Bytes
7	Cached memory	1024 Bytes
10	Swap space	1024 Bytes
31	/	4096 Bytes
35	/boot	1024 Bytes
36	/dev/shm	4096 Bytes

Data Query [SNMP - Get Processor Information]

Processor Index Number
0
1
2
3
4
5
6
7

Data Query [SNMP - Interface Statistics]

Index	Status	Description	Name (IF-MIB)	Alias (IF-MIB)	Type	Speed	High Speed	Hardware Address	IP Address
1	Up	lo	lo		softwareLoopback(24)	100000000	10		127.0.0.1
2	Up	eth0	eth0		ethermetCsmacd(6)	10000000000	1000	84:2B:2B:4A:77:30	218.211.34.170
3	Up	eth1	eth1		ethermetCsmacd(6)	10000000000	1000	84:2B:2B:4A:77:31	218.32.52.150
4	Down	sit0	sit0		tunnel(131)	0	0		

Select a graph type:
In/Out Bits (64-bit Counters)

Data Query [ucd/net - Get Monitored Partitions]

This data query returned 0 rows, perhaps there was a problem executing this data query. You can [run this data query in debug mode](#) to get more information.

Data Query [Unix - Get Mounted Partitions]

Device Name	Mount Point
/dev/mapper/VolGroup-lv_root	/
/dev/vda1	/boot

Cancel
Create

11. 這邊可直接忽略，直接點選 “Create”

Create Graph from 'Linux - Memory Usage'

Create Graph from 'Unix - Load Average'

Create Graph from 'Unix - Logged in Users'

Graph Items [Template: Unix - Logged in Users]

Legend Color

4668E4

The color to use for the legend.

Create Graph from 'Unix - Processes'

Graph Items [Template: Unix - Processes]

Legend Color

F51D30

The color to use for the legend.

Create 8 Graphs from 'SNMP - Get Mounted Partitions'

Create 8 Graphs from 'SNMP - Get Processor Information'

Graph Items [Template: Host MIB - CPU Utilization]

Legend Color

FF0000

The color to use for the legend.

Create 4 Graphs from 'SNMP - Interface Statistics'

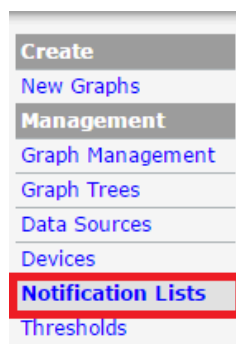
Create 2 Graphs from 'Unix - Get Mounted Partitions'

Cancel
Create

12. 已成功產生該設備之相關圖形數據

```
• Created graph: VOS-1 - Memory Usage
• Created graph: VOS-1 - Load Average
• Created graph: VOS-1 - Logged in Users
• Created graph: VOS-1 - Processes
• Created graph: VOS-1 - Used Space - Physical memory
• Created graph: VOS-1 - Used Space - Virtual memory
• Created graph: VOS-1 - Used Space - Memory buffers
• Created graph: VOS-1 - Used Space - Cached memory
• Created graph: VOS-1 - Used Space - Swap space
• Created graph: VOS-1 - Used Space - /
• Created graph: VOS-1 - Used Space - /boot
• Created graph: VOS-1 - Used Space - /dev/shm
• Created graph: VOS-1 - CPU Utilization - CPU0
• Created graph: VOS-1 - CPU Utilization - CPU1
• Created graph: VOS-1 - CPU Utilization - CPU2
• Created graph: VOS-1 - CPU Utilization - CPU3
• Created graph: VOS-1 - CPU Utilization - CPU4
• Created graph: VOS-1 - CPU Utilization - CPU5
• Created graph: VOS-1 - CPU Utilization - CPU6
• Created graph: VOS-1 - CPU Utilization - CPU7
• Created graph: VOS-1 - Traffic - lo
• Created graph: VOS-1 - Traffic - eth0
• Created graph: VOS-1 - Traffic - eth1
• Created graph: VOS-1 - Traffic - sit0
• Created graph: VOS-1 - Disk Space - /dev/mapper/Vol1
• Created graph: VOS-1 - Disk Space - /dev/vda1
```

13. 點選 “Notification Lists” 則可開始建立告警通知的相關資訊



14. 點選 “Add”



15. 根據以下欄位輸入相關資料，設定好即可 “Save” 離開

A screenshot of the 'General Settings' form for a Notification List. The form has tabs for 'General', 'Hosts', 'Thresholds', and 'Templates'. The 'General' tab is selected. The form contains the following fields: 'Name' (with a placeholder 'Enter a name for this Notification List'), 'Description' (with a placeholder 'Enter a description for this Notification List'), and 'Email Addresses' (with a placeholder 'Enter a comma separated list of Email addresses for this notification list.'). The 'Host status' field is highlighted with a red box and contains the text 'Host is Down!'. The 'Email Addresses' field is also highlighted with a red box and contains the text 'kidd@joint-power.com.tw,clint@joint-power.com.tw'. At the bottom right of the form are 'Return' and 'Save' buttons.

16. 成功建立一筆告警通知資料

<< Previous		Showing Rows 1 to 1 of 1 [1]		Next >>
List Name**	Description	Emails		
Host status	Host Up or Down	kidd@joint-power.com.tw,clint@joint-power.com.tw		☐
<< Previous		Showing Rows 1 to 1 of 1 [1]		Next >>

17. 選取 “Graph Trees” 來建立設備群組



18. 點選 “Add” 建立新群組

Graph Trees		Add
Name		
Default Tree		x
Dell Switch		x
Router		x
VOS		x

19. 輸入群組名稱，並點選 “Create”

Graph Trees [new]	
Name	VOS
A useful name for this graph tree.	
Sorting Type	Manual Ordering (No Sorting) ▼
Choose how items in this tree will be sorted.	
Cancel Create	

20. 點選 "Add" 來選擇相關設備

Graph Trees [edit: VOS]

Name
A useful name for this graph tree.
VOS

Sorting Type
Choose how items in this tree will be sorted.
Manual Ordering (No Sorting) ▼

Tree Items Add

Expand All Collapse All

Item	Value
Host: VOS-2-New (61.220.128.71) (Edit host)	Host

Return Save

21. 選擇相關設備資訊

Tree Item Type : Host

Host : 選擇設備名稱及 IP

Graph Grouping Style : Graph Template

Tree Items

Parent Item
Choose the parent for this header/graph.
[root] ▼

Tree Item Type
Choose what type of tree item this is.
Host ▼

Tree Item Value
Host
Choose a host here to add it to the tree.
VOS-1 (218.211.34.170) ▼

Graph Grouping Style
Choose how graphs are grouped when drawn for this particular host on the tree.
Graph Template ▼

Round Robin Archive
Choose a round robin archive to control how Graph Thumbnails are displayed when using Tree Export.
Hourly (1 Minute Average) ▼

Cancel Create

22. 點選 "Save"

Graph Trees [edit: VOS]

Name
A useful name for this graph tree.
VOS

Sorting Type
Choose how items in this tree will be sorted.
Manual Ordering (No Sorting) ▼

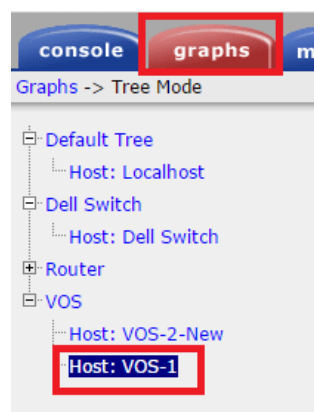
Tree Items Add

Expand All Collapse All

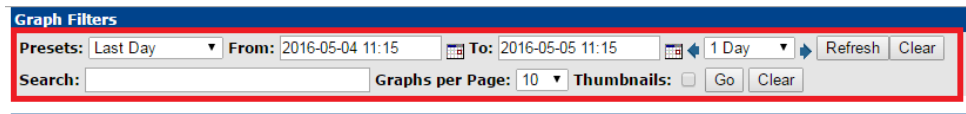
Item	Value
Host: VOS-2-New (61.220.128.71) (Edit host)	Host
Host: VOS-1 (218.211.34.170) (Edit host)	Host

Return **Save**

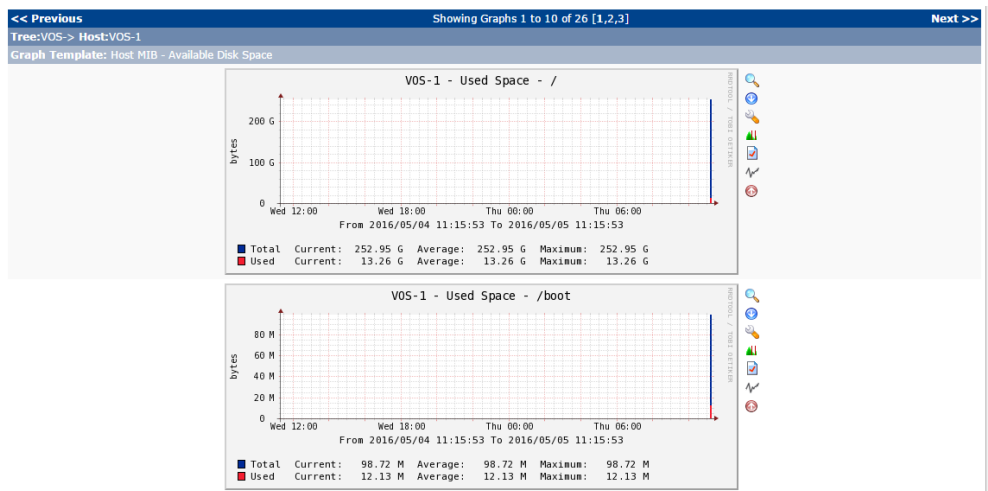
23. 進入 "graphs"，選取剛建立的設備



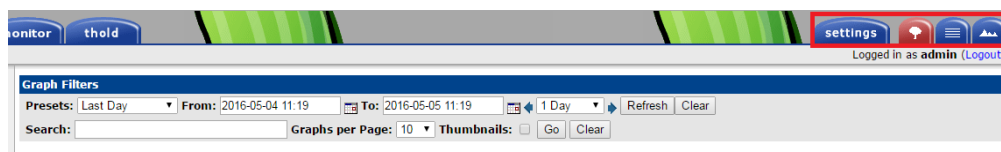
24. Graph Filters 的參數可依自己習性來設定變更(請自行研究，不再多做描述)



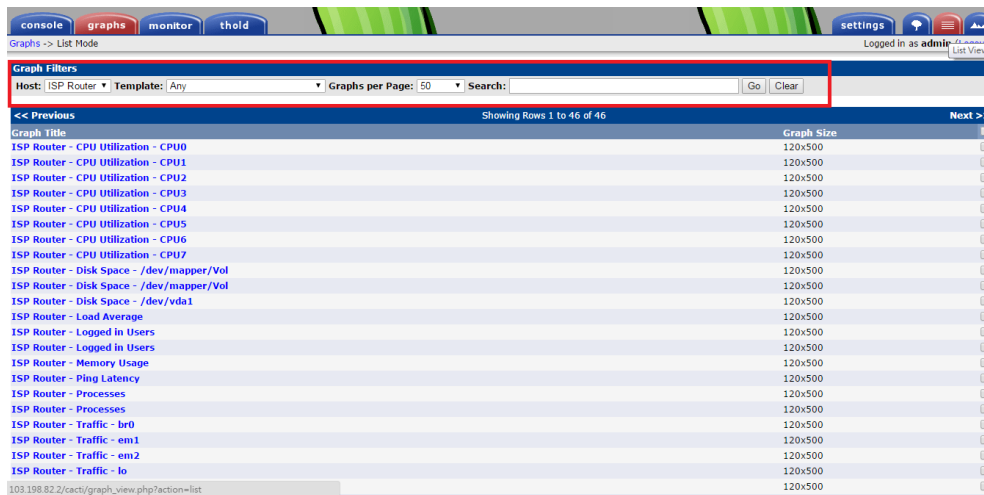
25. 圖形數據需等 5 分鐘後會自行產生



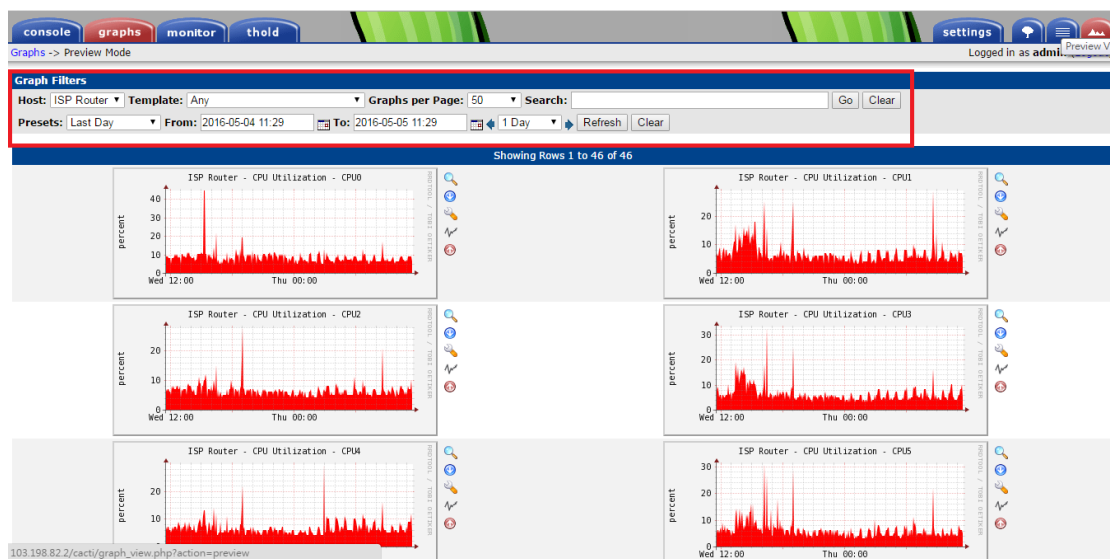
26. 圖形呈現可分 Tree View、List View 及 Preview View，預設是 Tree View



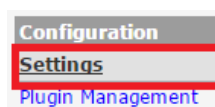
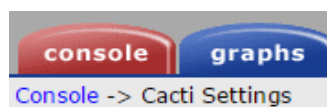
27. List View



28. Preview View



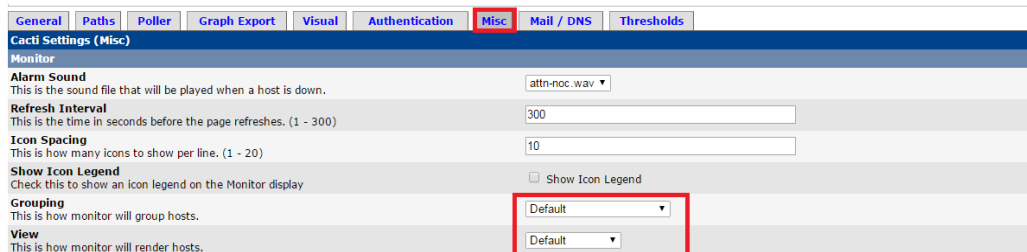
29. 進入 “Console” 的 “Settings”



30. 點選 “Misc” 來設定 “monitor” 的呈現方式

Grouping：預設是 Default

View：預設是 Default



31. 進入 “monitor”，檢查設備的連線狀態

綠色：設備連線正常

藍色(灰色)：數據上傳緩衝中

紅色：設備斷線，並會即時發出 “Attn, NOC” 的聲音來告知管理者

