

流量偵測 RRDTool+Cacti 安裝與設定

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日期：2009-05-16

目錄

○、環境	3
一、套件安裝設定	4
1.1 安裝 CACTI 執行平台	4
1.2 安裝 CACTI 相關套件	4
1.3 設定 CACTI 資料夾權限	4
1.4 設定 CACTI SQL 參數	4
1.5 匯入 CACTI MySQL 相關資料庫	4
1.6 設定 CACTI 排程	4
1.7 設定 CACTID 設定檔	4
二、CACTI Web 連線	5
2.1 CACTI Web 首次連線設定	5
2.2 CACTI Web 登入	6
2.3 管理者登入畫面	7
2.4 匿名觀看狀態圖	7
三、CACTI 帳號設定	8
3.1 新增帳號	8
3.2 設定帳號詳細資訊	9
四、CACTI 參數設定	11
4.1 一般參數設定-General	11
4.2 路徑參數設定-Paths	11
4.3 偵測參數設定-Poller	12
4.4 圖表匯出設定-Graph Export	13
4.5 視覺相關設定-Visual	14
4.6 認證相關設定-Authentication	14
五、管理偵測目標	15
5.1 設定偵測目標	15
5.2 建立圖表樹狀架構	16
5.3 建立偵測圖表	17
5.4 刪除偵測圖表	18
六、查尋偵測圖表	19
6.1 流量圖表說明	19
6.2 圖表特定時段狀態查詢	19

目錄

七、修改圖表標題.....	21
7.1 從圖表管理修改標題	21
7.2 從資料庫修改標題	22
八、設備及伺服器 SNMP 設定.....	25
8.1 Linux 伺服器 SNMP 設定	25
8.2 Windows 伺服器 SNMP 設定.....	25
8.3 Cisco 交換器 SNMP 設定.....	27
九、CACTI 圖表中文支援.....	28
9.1 對 RRDTool 套件打上雙字元處理補丁.....	28
9.2 修改語系	29
9.3 在 CACTI 中設定使用的中文字型檔.....	29
9.4 觀看圖表中文支援狀況	30
十、圖表中文化	31
10.1 圖表樣版(Graph Template)中文化	31
10.2 Data Queries 的圖表樣版中文化	34
10.3 對圖表 Round Robin Archives 名稱中文化...	35
附錄一、常用 Linux OID/MIB 對照表.....	37
參考資料.....	38
Change Log.....	39

INFORMATION SERVICE

○、環境

Intel(R) Xeon(R) CPU 5130 @ 2.00GHz X1

RAM 1024MB

CentOS 4 i386

%packages

@ admin-tools

@ editors

@ system-tools

@ dialup

@ chinese-support

@ server-cfg

grub

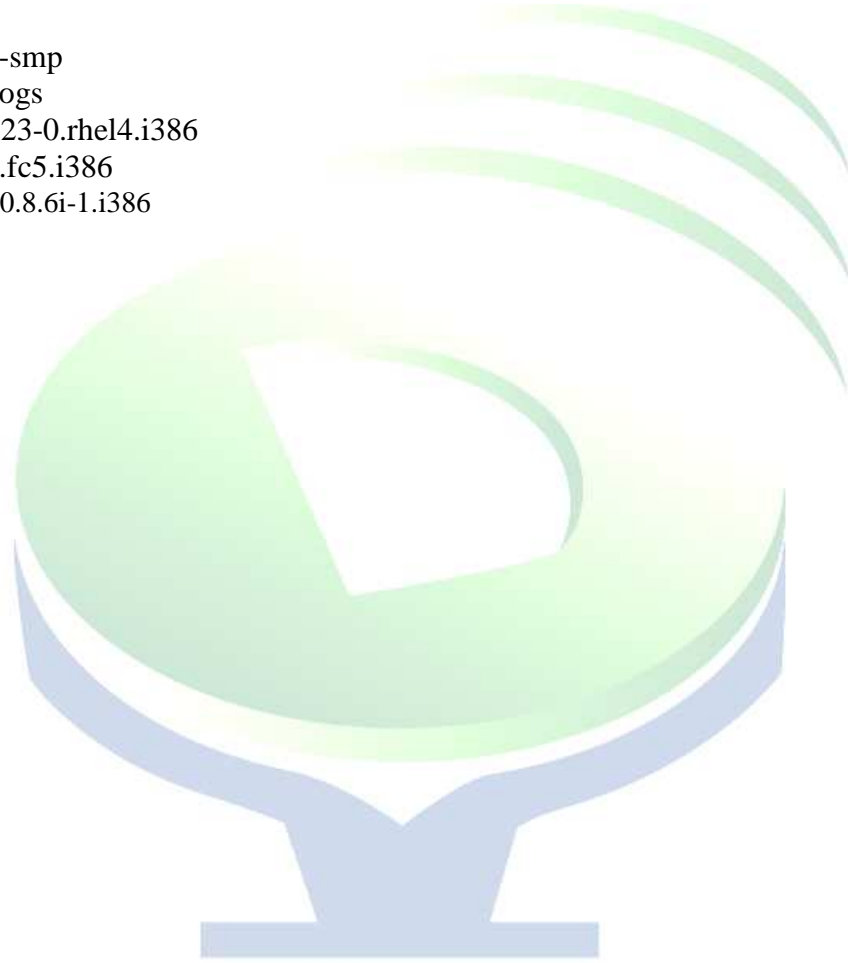
kernel-smp

e2fsprogs

rrdtool-1.2.23-0.rhel4.i386

cacti-0.8.6i.fc5.i386

cacti-cactid-0.8.6i-1.i386



INFORMATION SERVICE

一、套件安裝設定

1.1 安裝 CACTI 執行平台

```
# yum -y install httpd httpd-devel httpd-manual php php-devel php-mysql mysql
mysql-devel mysql-server
# yum -y install net-snmp net-snmp-utils net-snmp-devel php-snmp php-gd
# yum -y install gcc glib glibc automake autoconf rpm-build
# chkconfig mysqld on
# chkconfig httpd on
# service mysqld restart
# service httpd restart
```

1.2 安裝 CACTI 相關套件

```
# wget ftp://rpmfind.net/linux/sourceforge/o/op/opennms/rrdtool-1.2.23-0.rhel4.i386.rpm
# wget ftp://rpmfind.net/linux/sourceforge/c/ca/cacti/cacti-0.8.6i.fc5.i386.rpm
# wget http://www.cacti.net/downloads/cactid/packages/SRPMS/cacti-cactid-0.8.6i-1.src.rpm

# rpm -ivh rrdtool* cacti*
# cd /usr/src/redhat/SPECS
# rpmbuild -bb cactid.spec
# cd /usr/src/redhat/RPMS/i386/
# rpm -ivh cacti*
```

1.3 設定 CACTI 資料夾權限

```
# chown -R cactiuser /var/www/html/cacti/log /var/www/html/cacti/rra
```

1.4 設定 CACTI SQL 參數

```
# vi /var/www/html/cacti/include/config.php
$database_type = "mysql";
$database_default = "cacti";
$database_hostname = "localhost";
$database_username = "root";
$database_password = "";
$database_port = "3306";
```

1.5 匯入 CACTI MySQL 相關資料庫

```
# vi /var/www/html/cacti/cacti.sql 檔頭加入
create database cacti ;
use cacti ;
# mysql -u root < /var/www/html/cacti/cacti.sql
```

1.6 設定 CACTI 排程

```
# vi /etc/cron.d/cacti
*/5 * * * * cactiuser php /var/www/html/cacti/poller.php > /dev/null 2>&1
```

1.7 設定 CACTID 設定檔

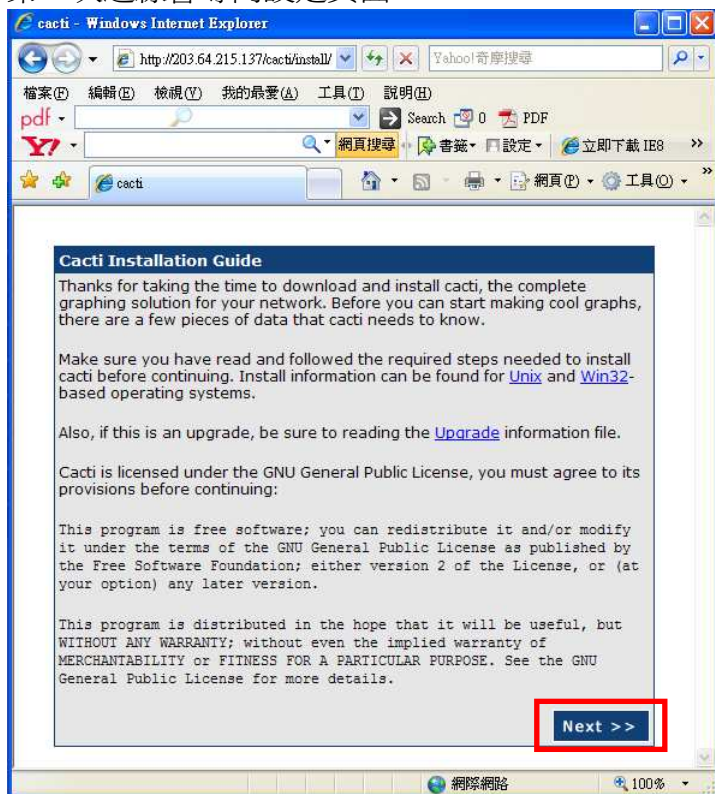
```
# vi /etc/cactid.conf
DB_Host      localhost
DB_Database  cacti
DB_User      root
DB_Pass      root
DB_Port      3306
```

二、CACTI Web 連線

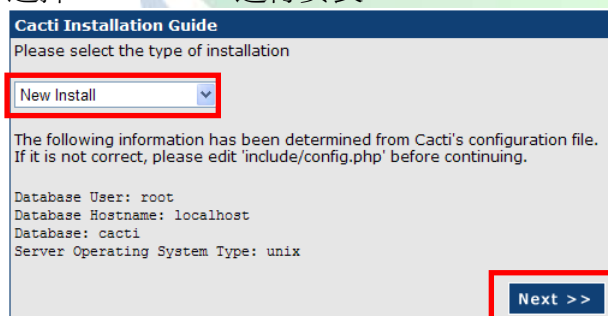
2.1 CACTI Web 首次連線設定

使用瀏覽器連線 http://SERVER_IP/cacti/

第一次連線會導向設定頁面



選擇 New Install 進行安裝



設定相關程式路徑及版本 – 設定完成

Cacti Installation Guide

Make sure all of these values are correct before continuing.

[FOUND] RRDTool Binary Path: The path to the rrdtool binary.

[FOUND] PHP Binary Path: The path to your PHP binary file (may require a php recompile to get this file).

[FOUND] snmpwalk Binary Path: The path to your snmpwalk binary.

[FOUND] snmpget Binary Path: The path to your snmpget binary.

[FOUND] snmpbulkwalk Binary Path: The path to your snmpbulkwalk binary.

[FOUND] snmpgetnext Binary Path: The path to your snmpgetnext binary.

[FOUND] Cacti Log File Path: The path to your Cacti log file.

SNMP Utility Version: The type of SNMP you have installed. Required if you are using SNMP v2c or don't have embedded SNMP support in PHP.
NET-SNMP 5.x

RRDTool Utility Version: The version of RRDTool that you have installed.
RRDTool 1.2.x

NOTE: Once you click "Finish", all of your settings will be saved and your database will be upgraded if this is an upgrade. You can change any of the settings on this screen at a later time by going to "Cacti Settings" from within Cacti.

Finish

2.2 CACTI Web 登入

- 預設路徑：http://YOUR_SERVER_UP/cacti/
- 第一次登入的預設帳號 admin，以設密碼：admin



c. 使用預設密碼登入後，強制要求修改密碼



User Login

*** Forced Password Change ***

Please enter a new password for cacti:

→ Password:

Confirm:

2.3 管理者登入畫面

console graphs

Console Logged in as admin (Logout)

Create

- New Graphs
- Management
 - Graph Management
 - Graph Trees
 - Data Sources
- Devices
- Collection Methods
 - Data Queries
 - Data Input Methods
- Templates
 - Graph Templates
 - Host Templates
 - Data Templates
- Import/Export
 - Import Templates
 - Export Templates
- Configuration
 - Settings
 - Utilities
 - System Utilities
 - User Management
 - Logout User

You are now logged into Cacti. You can follow these basic steps to get started.

- Create devices for network
- Create graphs for your new devices
- View your new graphs

2.4 匿名觀看狀態圖

http://YOUR_SERVER_IP/cacti/graph_view.php

graphs settings

Graphs -> Tree Mode

Presets: Last Day From: 2009-05-07 10:34 To: 2009-05-08 10:34 refresh clear

Tree: Server Tree-> Host: Server - DNS-1

Data Query: SNMP -1- Interface Statistics

eth0

Server - DNS-1 - Traffic - 203.64.215.1 (eth0)

bits per second

From 2009/05/07 10:34:35 To 2009/05/08 10:34:35

■ Inbound Current: 42.85 k Average: 17.31 k Maximum: 52.27 k


■ Outbound Current: 39.22 k Average: 12.09 k Maximum: 52.16 k

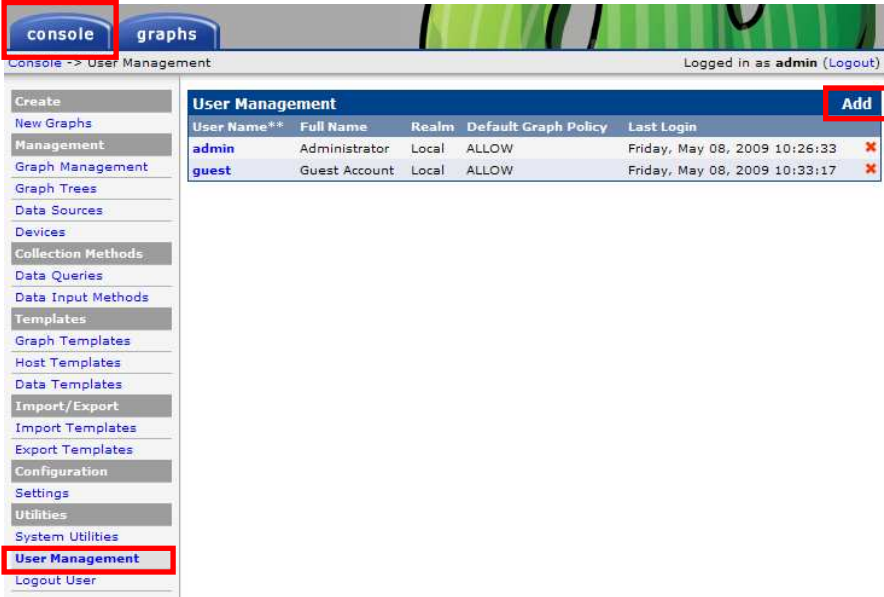
Data Query: SNMP -2- Get Mounted Partitions

Server - DNS-1 - Used Space - /

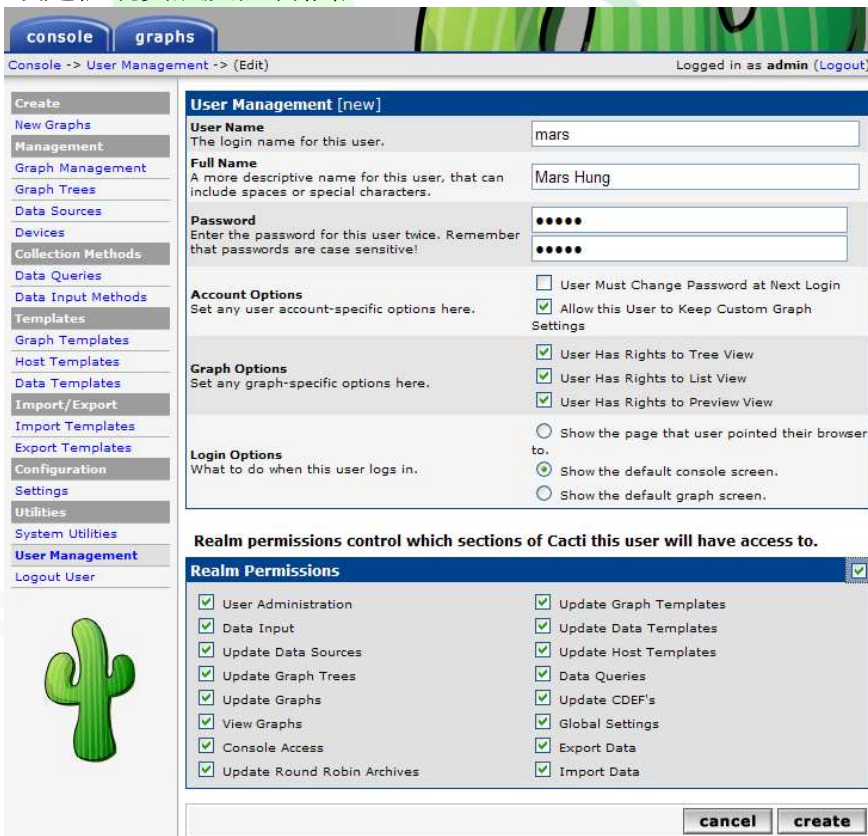
三、CACTI 帳號設定

3.1 新增帳號

a. 選擇  => User Management => Add



b. 設定帳號資訊及控制權限



3.2 設定帳號詳細資訊

- a. 選擇  => User Management => mars (目標帳號)

User Management					Add
User Name**	Full Name	Realm	Default Graph Policy	Last Login	
admin	Administrator	Local	ALLOW	Friday, May 08, 2009 10:46:24	✖
guest	Guest Account	Local	ALLOW	Friday, May 08, 2009 10:33:17	✖
mars	Mars Hung	Local	DENY	N/A	✖

User Management [edit: mars]

User Name
The login name for this user.

Full Name
A more descriptive name for this user, that can include spaces or special characters.

Password
Enter the password for this user twice. Remember that passwords are case sensitive!

Account Options
Set any user account-specific options here.

User Must Change Password at Next Login
 Allow this User to Keep Custom Graph Settings

Graph Options
Set any graph-specific options here.

User Has Rights to Tree View
 User Has Rights to List View
 User Has Rights to Preview View

Login Options
What to do when this user logs in.

Show the page that user pointed their browser to.
 Show the default console screen.
 Show the default graph screen.

帳號所有權限及設定

Realm Permissions | **Graph Permissions** | **Graph Settings**

Realm permissions control which sections of Cacti this user will have access to.

Realm Permissions

- d. 設定控制權限 控制權限

Realm Permissions | **Graph Permissions** | **Graph Settings**

Realm permissions control which sections of Cacti this user will have access to.

Realm Permissions

<input checked="" type="checkbox"/> User Administration	<input checked="" type="checkbox"/> Update Graph Templates
<input checked="" type="checkbox"/> Data Input	<input checked="" type="checkbox"/> Update Data Templates
<input checked="" type="checkbox"/> Update Data Sources	<input checked="" type="checkbox"/> Update Host Templates
<input checked="" type="checkbox"/> Update Graph Trees	<input checked="" type="checkbox"/> Data Queries
<input checked="" type="checkbox"/> Update Graphs	<input checked="" type="checkbox"/> Update CDEF's
<input checked="" type="checkbox"/> View Graphs	<input checked="" type="checkbox"/> Global Settings
<input checked="" type="checkbox"/> Console Access	<input checked="" type="checkbox"/> Export Data
<input checked="" type="checkbox"/> Update Round Robin Archives	<input checked="" type="checkbox"/> Import Data

- e. 設定圖片權限 圖片權限

Realm Permissions | **Graph Permissions** | **Graph Settings**

Graph policies will be evaluated in the order shown until a match is found.

Graph Permissions (By Graph)

Default Policy
The default allow/deny graph policy for this user.

No Graphs

Add Graph:

Graph Permissions (By Host)

Default Policy
The default allow/deny graph policy for this user.

No Hosts

Add Host:

Graph Permissions (By Graph Template)

Default Policy
The default allow/deny graph policy for this user.

No Graph Templates

Add Graph Template:

Tree Permissions

Default Policy
The default allow/deny graph policy for this user.

No Trees

Add Tree:

f. 設定完成

User Management					Add
User Name**	Full Name	Realm	Default Graph Policy	Last Login	
admin	Administrator	Local	ALLOW	Friday, May 08, 2009 10:46:24	✘
guest	Guest Account	Local	ALLOW	Friday, May 08, 2009 10:33:17	✘
mars	Mars Hung	Local	ALLOW	N/A	✘



INFORMATION SERVICE

四、CACTI 參數設定

4.1 一般參數設定-General

選擇 console => Settings => General

General Paths Poller Graph Export Visual Authentication

Cacti Settings (General)

Event Logging

Log File Destination
How will Cacti handle event logging. Logfile Only

Web Events
What Cacti website messages should be placed in the log.
 Web SNMP Messages
 Web RRD Graph Syntax
 Graph Export Messages

Poller Specific Logging

Poller Logging Level
What level of detail do you want sent to the log file. WARNING: Leaving in any other status than NONE or LOW can exhaust your disk space rapidly. LOW - Statistics and Errors

Poller Syslog / Eventlog Selection
If you are using the Syslog/Eventlog, What Cacti poller messages should be placed in the Syslog/Eventlog.
 Poller Statistics
 Poller Warnings
 Poller Errors

Required Tool Versions

SNMP Utility Version
The type of SNMP you have installed. Required if you are using SNMP v2c or don't have embedded SNMP support in PHP. NET-SNMP 5.x

RRDTool Utility Version
The version of RRDTool that you have installed. RRDTool 1.2.x

SNMP Defaults

SNMP Version
Default SNMP version for all new hosts. Version 1

SNMP Community
Default SNMP read community for all new hosts. public

SNMP Username (v3)
The SNMP v3 Username for polling hosts.

SNMP Password (v3)
The SNMP v3 Password for polling hosts.

SNMP Timeout
Default SNMP timeout in milliseconds. 500

SNMP Port Number
Default UDP port to be used for SNMP Calls. Typically 161. 161

SNMP Retries
The number times the SNMP poller will attempt to reach the host before failing. 3

Other Defaults

Remove Verification
Prompt user before item deletion. Remove Verification

Log 設定
Poller Log 設定
SNMP 版本
RRDTool 版本
SNMP 預設參數

4.2 路徑參數設定-Paths

選擇 console => Settings => Paths

General Paths Poller Graph Export Visual Authentication

Cacti Settings (Paths)

Required Tool Paths

snmpwalk Binary Path
The path to your snmpwalk binary. /usr/bin/snmpwalk

snmpget Binary Path
The path to your snmpget binary. /usr/bin/snmpget

snmpbulkwalk Binary Path
The path to your snmpbulkwalk binary. /usr/bin/snmpbulkwalk

snmpgetnext Binary Path
The path to your snmpgetnext binary. /usr/bin/snmpgetnext

RRDTool Binary Path
The path to the rrdtool binary. /usr/bin/rrdtool

RRDTool Default Font Path
The path to the rrdtool default true type font for version 1.2 and above.

PHP Binary Path
The path to your PHP binary file (may require a php recompile to get this file). /usr/bin/php

Logging

Cacti Log File Path
The path to your Cacti log file (if blank, defaults to /var/www/html/cacti/log/cacti.log) /var/www/html/cacti/log/cacti.log

Alternate Poller Path

Cactid Poller File Path
The path to Cactid binary. /usr/bin/cactid

必要工具執行路徑
Cacti Log 路徑
Cactid 執行檔路徑

4.3 偵測參數設定-Poller

選擇  => Settings => Poller

General | **Paths** | **Poller** | Graph Export | Visual | Authentication

Cacti Settings (Poller)

General

Enabled
If you wish to stop the polling process, uncheck this box. Enabled **啟用 Poller 偵測程式**

Poller Type
The poller type to use. This setting will take effect at next polling interval. **Poller 模式 (cmd.php 慢 / cactid 快)**
如有看不到圖表的狀況，可切換至 cactid 試試

Maximum Concurrent Poller Processes
The number of concurrent processes to execute. Using a higher number when using cmd.php will improve performance. Performance improvements in cactid are best resolved with the threads parameter. **Poller 最大 Processes 數量**

Cactid Specific Execution Parameters

Maximum Threads per Process
The maximum threads allowed per process. Using a higher number when using cactid will improve performance. **每個 Process 最大 Thread 數**

Number of PHP Script Servers
The number of concurrent script server processes to run per Cactid process. Settings between 1 and 10 are accepted. This parameter will help if you are running several threads and script server scripts. **PHP Script Server 數量**

Script and Script Server Timeout Value
The maximum time that Cacti will wait on a script to complete. This timeout value is in seconds. **Timeout 時間設定**

The Maximum SNMP OID's Per SNMP Get Request
The maximum number of snmp get OID's to issue per snmp request. Increasing this value speeds poller performance over slow links. The maximum value is 60 OID's. **SNMP 每次 OID 最大取得數**

Poller Host Availability Settings

Downed Host Detection
The method Cacti will use to determine if a host is available for polling. NOTE: It is recommended that, at a minimum, SNMP always be selected. **電腦主機偵測方式**

Ping Type
The type of ping packet to sent. NOTE: ICMP requires that the Cacti Service ID have root privileges in Unix. **Ping 格式**

Ping Timeout Value
The timeout value to use for host ICMP and UDP ping. This host SNMP timeout value applies for SNMP pings. **Ping Timeout 時間**


Ping Retry Count
The number of times Cacti will attempt to ping a host before failing. **Ping 重試次數**

Host Up/Down Settings

Failure Count
The number of polling intervals a host must be down before logging an error and reporting host as down.

Recovery Count
The number of polling intervals a host must remain up before returning host to an up status and issuing a notice.

4.4 圖表匯出設定-Graph Export

選擇  => Settings => Graph Export

General Paths Poller **Graph Export** Visual Authentication

Cacti Settings (Graph Export)

General

Export Method
Choose which export method to use. Classic (local path) **圖表匯出方式**

Presentation Method
Choose which presentation would you want for the html generated pages. If you choose classical presentation, the graphs will be in a only-one-html page. If you choose tree presentation, the graph tree architecture will be kept in the static html pages. Tree Presentation **圖表程現方式**

Tree Settings

Tree Isolation
This setting determines if the entire tree is treated as a single hierarchy or as separate hierarchies. If they are treated separately, graphs will be isolated from one another. Multiple Tree Representation **圖表分隔方式**

Effective User Name
The user name to utilize for establishing export permissions. This user name will be used to determine which graphs/tree's are exported. This setting works in conjunction with the current on/off behavior available within the current templates. admin **執行帳號**

Expand Tree Hosts
This settings determines if the tree hosts will be expanded or not. If set to expanded, each host will have a sub-folder containing either data templates or data query items. Off **展開樹狀結構**

Thumbnail Settings

Thumbnail Height
The height of thumbnail graphs in pixels. 100 **縮圖高度**

Thumbnail Width
The width of thumbnail graphs in pixels. 300 **縮圖寬度**

Thumbnail Columns
The number of columns to use when displaying thumbnail graphs. 2 **縮圖欄數**

Paths

Export Directory (both local and ftp)
This is the directory, either on the local system or on the remote system, that will contain the exported data. /tmp **儲存路徑**

Local Scratch Directory (ftp only)
This is the a directory that cacti will temporarily store output prior to sending to the remote site via ftp. The contents of this directory will be deleted after the ftp is completed. **暫存路徑**

Timing

Export timing
Choose when to export graphs. Hourly at specified minutes **匯出排程方式**

Export Every x Times
If you don't want Cacti to export static images every 5 minutes, put another number here. For instance, 3 would equal every 15 minutes. **每隔 x 次 poller 匯出**

Hourly at specified minutes
If you want Cacti to export static images on an hourly basis, put the minutes of the hour when to do that. Cacti assumes that you run the data gathering script every 5 minutes, so it will round your value to the one closest to its runtime. For instance, 43 would equal 40 minutes past the hour. 26 **每小時 x 分匯出**

Daily at specified time
If you want Cacti to export static images on an daily basis, put here the time when to do that. Cacti assumes that you run the data gathering script every 5 minutes, so it will round your value to the one closest to its runtime. For instance, 21:23 would equal 20 minutes after 9 PM. **每天 x 時匯出**

FTP Options

Sanitize remote directory
Check this if you want to delete any existing files in the FTP remote directory. This option is in use only when using the PHP built-in ftp functions. Sanitize remote directory **清除已存在同名檔案**

FTP Host
Denotes the host to upload your graphs by ftp. **FTP 伺服器 IP**

FTP Port
Communication port with the ftp server (leave empty for defaults). Default: 21. **FTP 伺服器 Port 號**

Use passive mode
Check this if you want to connect in passive mode to the FTP server. Use passive mode **使用 passive 模式**

FTP User
Account to logon on the remote server (leave empty for defaults). Default: Anonymous. **FTP 帳號**

FTP Password
Password for the remote ftp account (leave empty for blank). **FTP 密碼**

4.5 視覺相關設定-Visual

選擇 **console** => Settings => Visual

General	Paths	Poller	Graph Export	Visual	Authentication
Cacti Settings (Visual)					
Graph Management					
Rows Per Page The number of rows to display on a single page for graph management.	30				每頁列數
Maximum Title Length The maximum number of characters to display for a graph title.	80				最長標題字數
Data Queries					
Maximum Field Length The maximum number of characters to display for a data query field.	15				最大欄位長度
Maximum JavaScript Rows The maximum number of data query rows to display with JavaScript on the 'New Graphs' page.	96				最大 Javascript 列數
Data Sources					
Rows Per Page The number of rows to display on a single page for data sources.	30				每頁列數
Maximum Title Length The maximum number of characters to display for a data source title.	45				最長標題字數
Devices					
Rows Per Page The number of rows to display on a single page for devices.	30				每頁列數
Log Management					
Default Log File Tail Lines How many lines of the Cacti log file to you want to tail, by default.	50 Lines				顯示 Log 倒數 50 筆
Log File Tail Refresh How many often do you want the Cacti log display to update.	20 Seconds				20 秒更新顯示的 Log
Default RRDtool 1.2 Fonts					
Title Font Size The size of the font used for Graph Titles	12				標題字型大小
Title Font File The font file to use for Graph Titles					標題字型檔
Legend Font Size The size of the font used for Graph Legend items	10				圖表字型大小
Legend Font File The font file to be used for Graph Legend items					圖表字型檔
Axis Font Size The size of the font used for Graph Axis	8				軸線字型大小
Axis Font File The font file to be used for Graph Axis items					軸線字型檔
Unit Font Size The size of the font used for Graph Units	8				單位字型大小
Unit Font File The size of the font used for Graph Unit items					單位字型檔

4.6 認證相關設定-Authentication

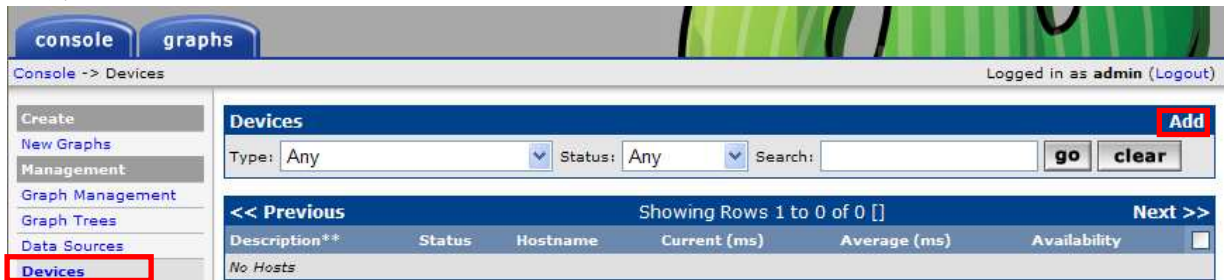
選擇 **console** => Settings => Authentication

General	Paths	Poller	Graph Export	Visual	Authentication
Cacti Settings (Authentication)					
General					
Use Cacti's Builtin Authentication By default Cacti handles user authentication, which allows you to create users and give them rights to different areas within Cacti. You can optionally turn this off if you are using other other means of authentication.	<input checked="" type="checkbox"/>				使用 Cacti 內建認證模組
Use LDAP Authentication This will allow users to use their LDAP credentials with cacti.	<input type="checkbox"/>				使用 LDAP 認證模式
Guest User The name of the guest user for viewing graphs; is "guest" by default.	guest				匿名訪問帳號
LDAP Settings					
LDAP Server The dns hostname or ip address of the server you wish to tie authentication from.					LDAP 伺服器位址
LDAP DN This is the Distinguished Name syntax, such as <username>@win2kdomain.lcl.					LDAP Base DN
LDAP Cacti Template User This is the user that cacti will use as a template for new LDAP users.					Cacti 使用者模版帳號

五、管理偵測目標

5.1 設定偵測目標

- a. 選擇  => Devices => Add



- b. 填寫目標資訊

- c. 確定目標資訊及偵測模版

Server -Linux- DNS-1 (203.64.215.1)

SNMP Information
 System: Linux ns.tsint.edu.tw 2.6.9-42.0.8.El5mp #1 SMP Tue Jan 30 12:18:01 EST 2007 x86_64
 Uptime: 21750792 (2 days, 12 hours, 25 minutes)
 Hostname: ns.tsint.edu.tw
 Location: Unknown (edit /etc/snmp/snmpd.conf)
 Contact: Root root@localhost (configure /etc/snmp/snmp.local.conf)

Devices [edit: Server -Linux- DNS-1]

Description: Server -Linux- DNS-1
 Hostname: 203.64.215.1
 Host Template: ucd/net SNMP Host
 Disable Host: Disable Host
 SNMP Community: public
 SNMP Username (v3):
 SNMP Password (v3):
 SNMP Version: Version 1
 SNMP Port: 161
 SNMP Timeout: 500

Associated Graph Templates

Graph Template Name	Status
1) Host MIB - Logged in Users	Is Being Graphed (Edit) ✖
2) ucd/net - CPU Usage	Is Being Graphed (Edit) ✖
3) ucd/net - Load Average	Is Being Graphed (Edit) ✖
4) ucd/net - Memory Usage	Is Being Graphed (Edit) ✖

Add Graph Template: Cisco - CPU Usage

Associated Data Queries

Data Query Name	Debugging	Re-Index Method	Status
1) SNMP -1- Interface Statistics	(Verbose Query)	Uptime Goes Backwards	Success [27 Items, 4 Rows] ○ ✖
2) SNMP -2- Get Mounted Partitions	(Verbose Query)	Uptime Goes Backwards	Success [21 Items, 7 Rows] ○ ✖

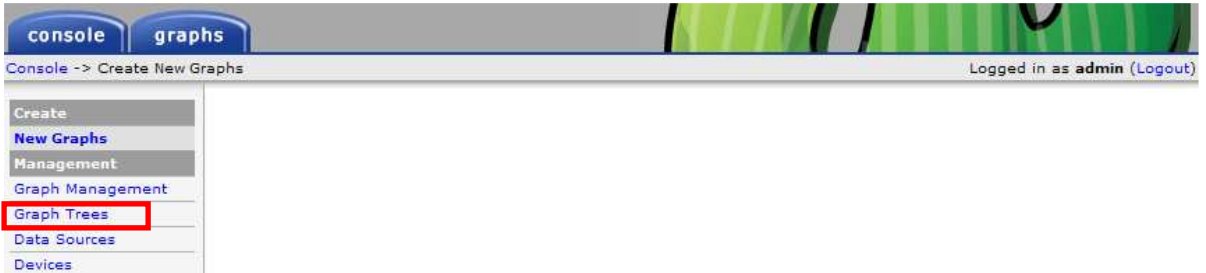
Add Data Query: Karlnet - Wireless Bridge Statistics Re-Index Method: Uptime Goes Backwards


d. 新增完成

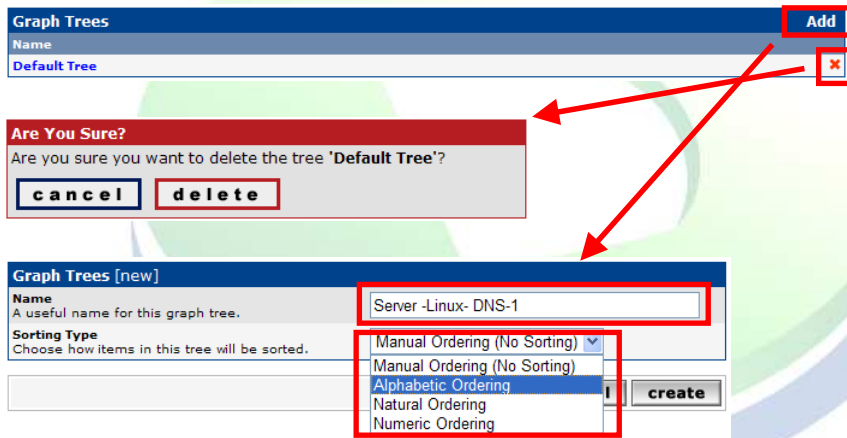
Devices						Add
Type:	Any	Status:	Any	Search:	dns-1	go clear
Showing Rows 1 to 1 of 1 [1]						Next >>
Description**	Status	Hostname	Current (ms)	Average (ms)	Availability	
Server -Linux- DNS-1	Up	203.64.215.1	3.95	3.09	100%	
Showing Rows 1 to 1 of 1 [1]						Next >>
Choose an action:						Delete go

5.2 建立圖表樹狀架構

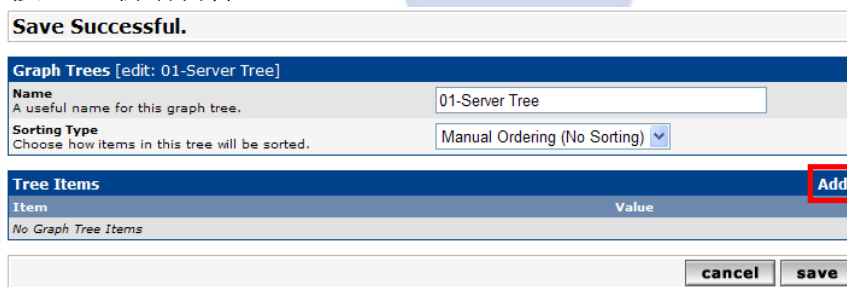
a. 選擇  => Graph Trees



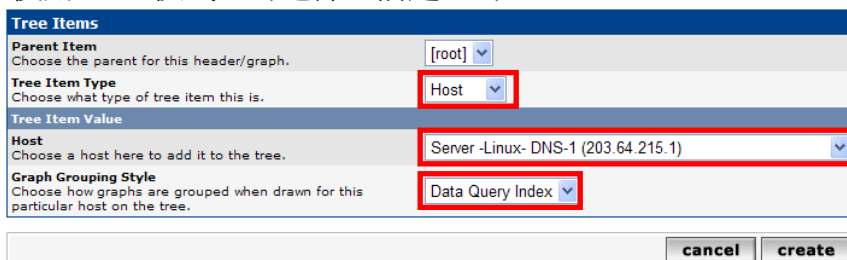
b. 按  刪除 Default Tree，並按 Add 新增新的 Graph Tree



c. 按 Add 新增物件



d. 使用 Host 模式，可選擇之前建立的 Devices – Server -Linux- DNS-1



e. 伺服器 Server -Linux- DNS-1 加入 01-Server Tree 完成

Save Successful.

Graph Trees [edit: 01-Server Tree]

Name: 01-Server Tree
A useful name for this graph tree.

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

Tree Items

Item	Value	Add
Host: Server -Linux- DNS-1 (203.64.215.1)	Host	<input type="checkbox"/>

cancel save

5.3 建立偵測圖表

a. 選擇  => New Graphs

console graphs

Console -> Create New Graphs Logged in as admin (Logout)

Create

- New Graphs**
- Management
- Graph Management
- Graph Trees
- Data Sources
- Devices

b. 選擇偵測圖表

Server -Linux- DNS-1 (203.64.215.1) ucd/net SNMP Host

Create new graphs for the following host: [*Edit this Host](#)
[*Create New Host](#)

Server -Linux- DNS-1 (203.64.215.1)

Graph Templates

Graph Template Name	<input type="checkbox"/>
Create: Host MIB - Logged in Users	<input type="checkbox"/>
Create: ucd/net - CPU Usage	<input checked="" type="checkbox"/>
Create: ucd/net - Load Average	<input checked="" type="checkbox"/>
Create: ucd/net - Memory Usage	<input checked="" type="checkbox"/>

Create: (Select a graph type to create)

Data Query [SNMP -1- Interface Statistics]

Index	Status	Description	Type	Speed	Hardware Address	IP Address	<input type="checkbox"/>
1	Up	lo	softwareLoopback(24)	10000000		127.0.0.1	<input type="checkbox"/>
2	Up	eth0	ethernetCsmacd(6)	1000000000	00:00:14:5E:16:DD:94	203.64.215.1	<input checked="" type="checkbox"/>
3	Down	eth1	ethernetCsmacd(6)	0	00:00:14:5E:16:DD:96	192.168.215.1	<input type="checkbox"/>
4	Down	sit0	tunnel(131)	0			<input type="checkbox"/>

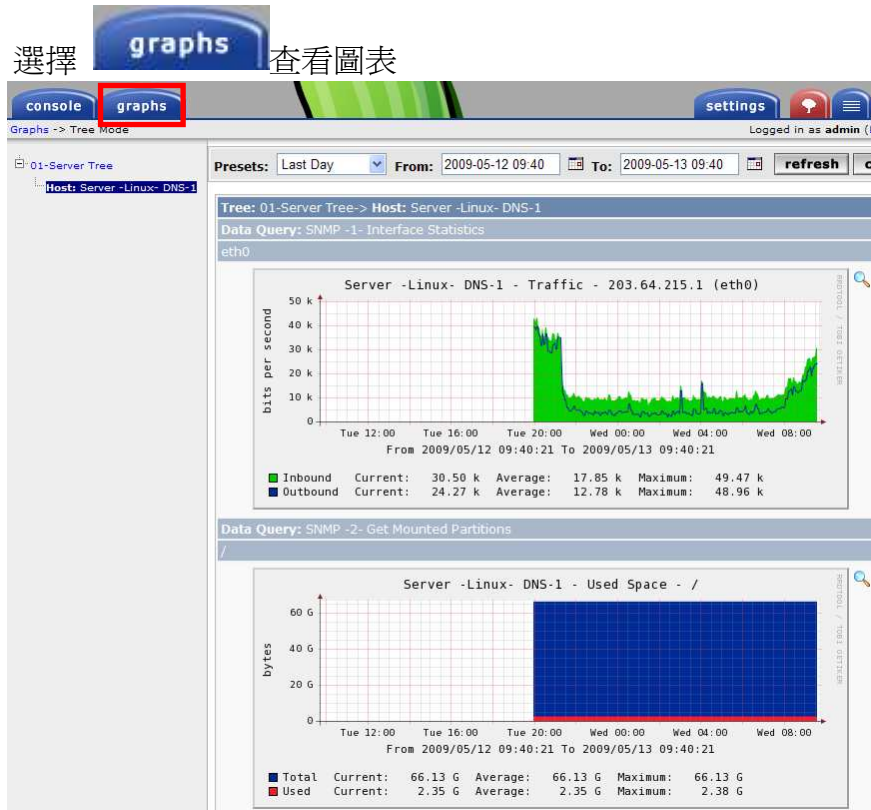
Select a graph type: In/Out Bits

Data Query [SNMP -2- Get Mounted Partitions]

Index	Description	Storage Allocation Units	<input type="checkbox"/>
1	Memory Buffers	1024 Bytes	<input type="checkbox"/>
2	Real Memory	1024 Bytes	<input type="checkbox"/>
3	Swap Space	1024 Bytes	<input type="checkbox"/>
4	/	4096 Bytes	<input checked="" type="checkbox"/>
5	/sys	4096 Bytes	<input type="checkbox"/>
6	/proc/bus/usb	4096 Bytes	<input type="checkbox"/>
7	/proc/sys/fs/binfmt_misc	4096 Bytes	<input type="checkbox"/>

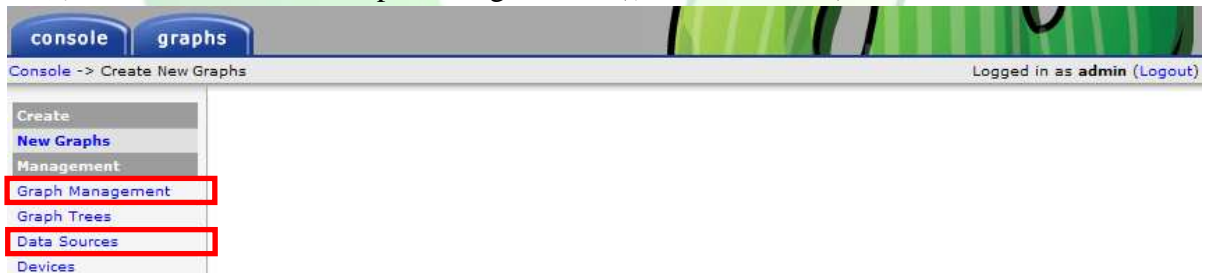
cancel create

c. 選擇 **graphs** 查看圖表



5.4 刪除偵測圖表

a. 選擇 **console** => Graph Management (或 Data Sources)



b. 刪除 Server -Linux- DNS-1 相關圖表

Data Sources [host: No Host] Add

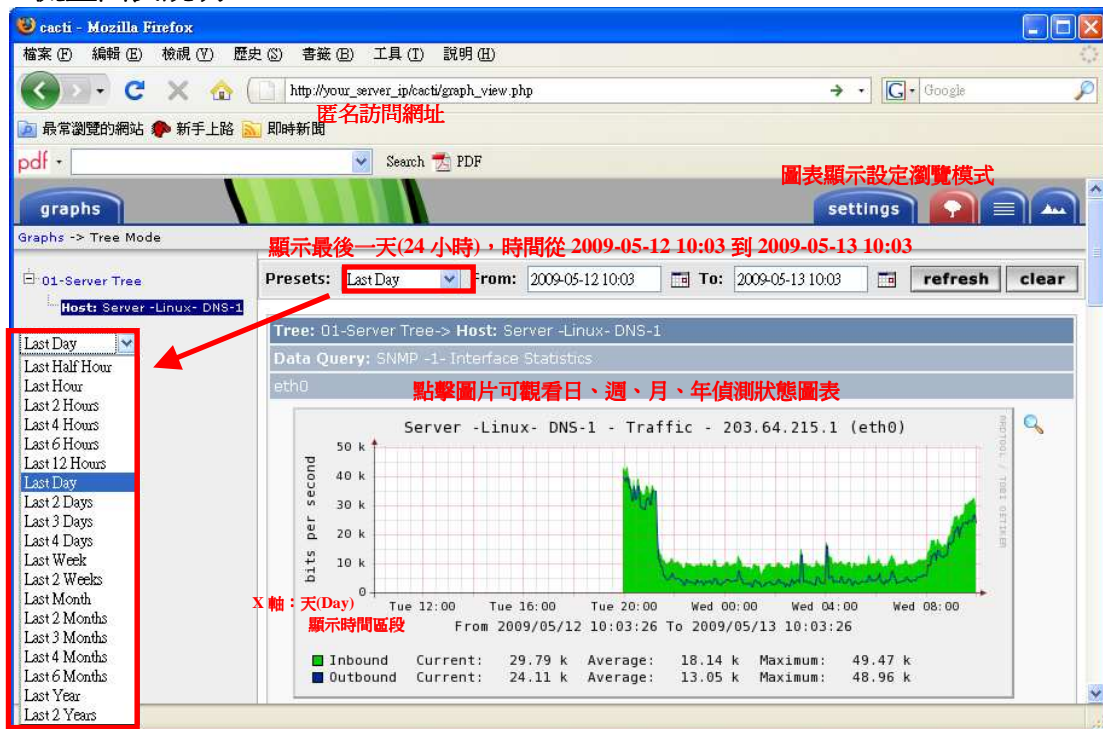
Select a host: Search:

Name**	Data Input Method	Active	Template Name	<input type="checkbox"/>
Server -Linux- DNS-1 - CPU Usage - Nice	Get SNMP Data	Yes	ucd/net - CPU Usage - Nice	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - CPU Usage - System	Get SNMP Data	Yes	ucd/net - CPU Usage - System	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - CPU Usage - User	Get SNMP Data	Yes	ucd/net - CPU Usage - User	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Load Average - 1 Minut...	Get SNMP Data	Yes	ucd/net - Load Average - 1 Minute	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Load Average - 15 Minu...	Get SNMP Data	Yes	ucd/net - Load Average - 15 Minute	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Load Average - 5 Minut...	Get SNMP Data	Yes	ucd/net - Load Average - 5 Minute	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Logged in Users	Get SNMP Data	Yes	Host MIB - Logged in Users	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Memory - Buffers	Get SNMP Data	Yes	ucd/net - Memory - Buffers	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Memory - Cache	Get SNMP Data	Yes	ucd/net - Memory - Cache	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Memory - Free	Get SNMP Data	Yes	ucd/net - Memory - Free	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Traffic - 203.64.215.1...	Get SNMP Data (Indexed)	Yes	Interface - Traffic	<input checked="" type="checkbox"/>
Server -Linux- DNS-1 - Used Space - /	Get Script Server Data (Indexed) Yes	Host MIB - Hard Drive Space		<input checked="" type="checkbox"/>

Choose an action:

六、查尋偵測圖表

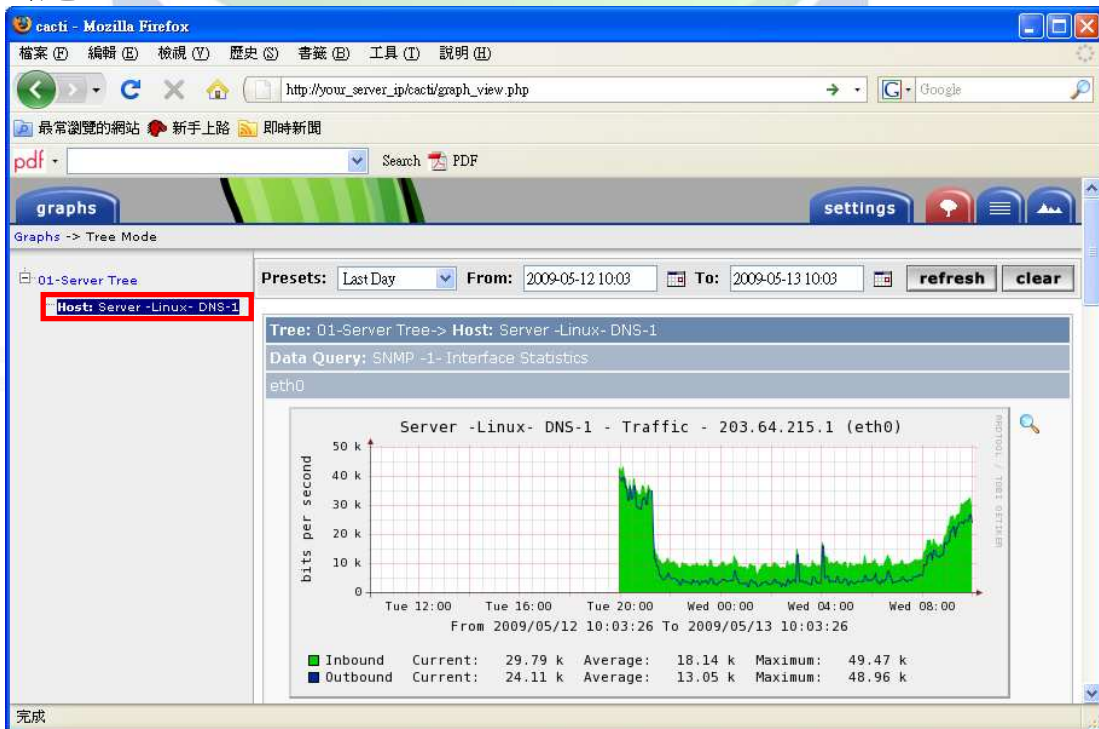
6.1 流量圖表說明



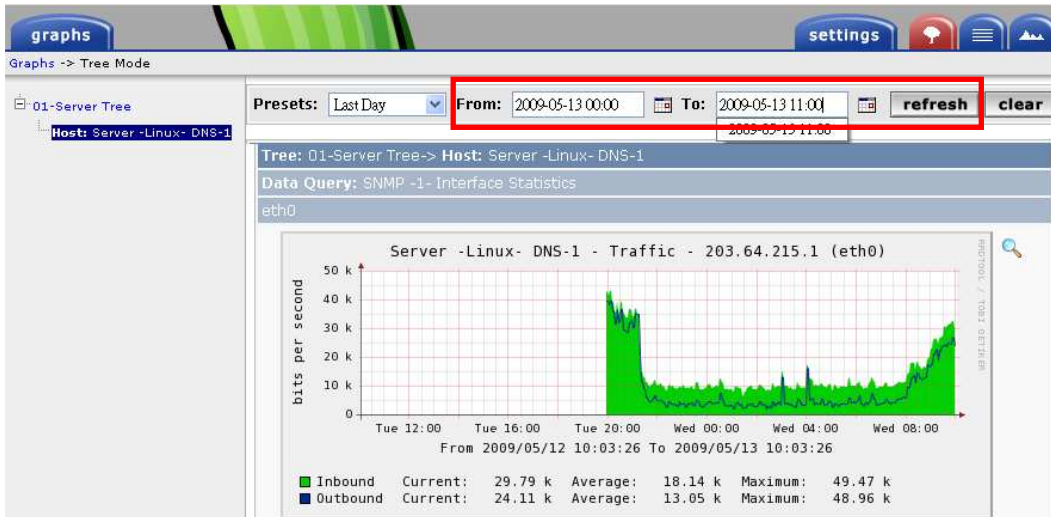
6.2 圖表特定時段狀態查詢

- 查詢目標：Server -Linux- DNS-1
時間：2009-05-13 00:00 到 2009-05-13 11:00

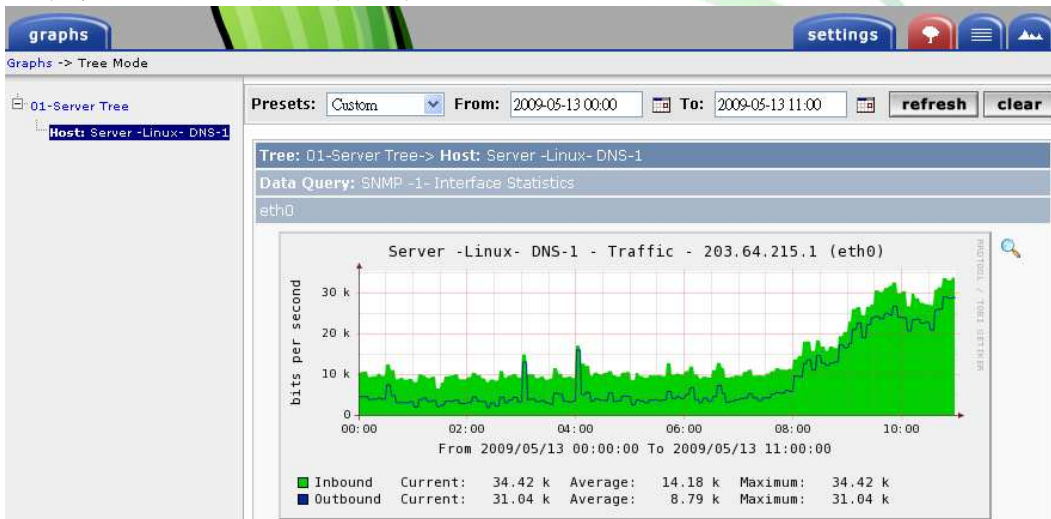
- 點選 **graphs** => 01-Server Tree => Server -Linux- DNS-1



c. 在 From 及 To 表單中輸入開始及結束時間，並按 refresh 鍵



d. 目標伺服器在該時間區段的狀態圖

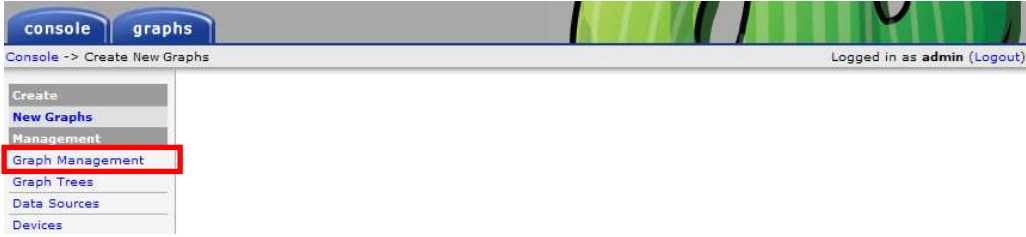


INFORMATION SERVICE

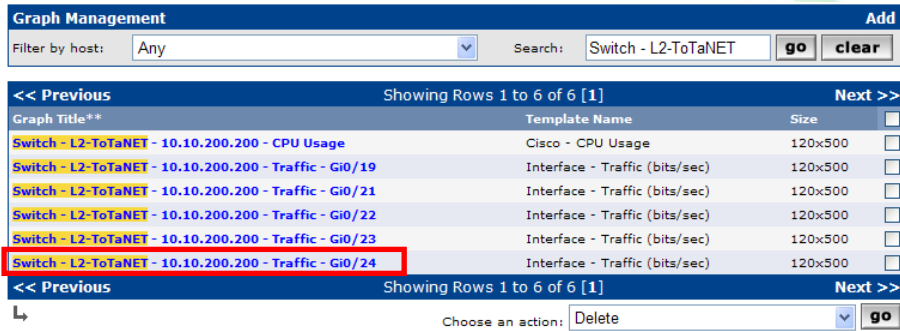
七、修改圖表標題

7.1 從圖表管理修改標題

- a. 選擇  => Graph Management 開啓圖表管理

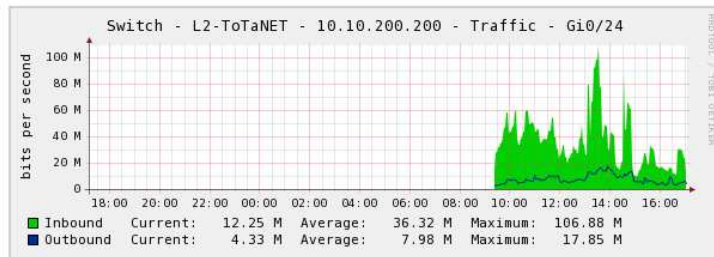
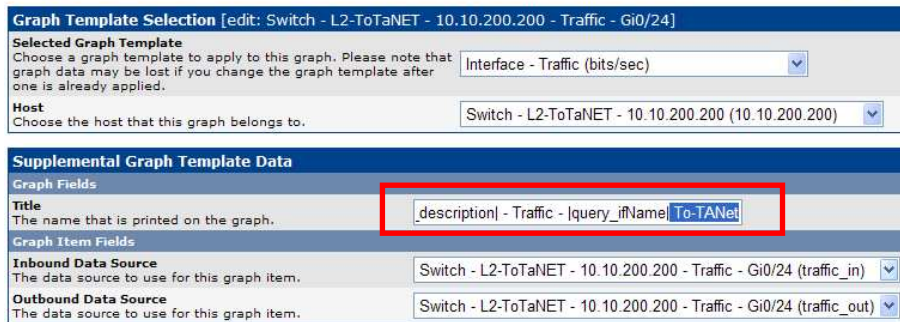


- b. 搜尋目標設備，點選目標圖表



- c. 在圖表標題欄位()中加入說明字串

Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/24 *Turn On Graph Debug Mode.



d. 修改完成

Save Successful.

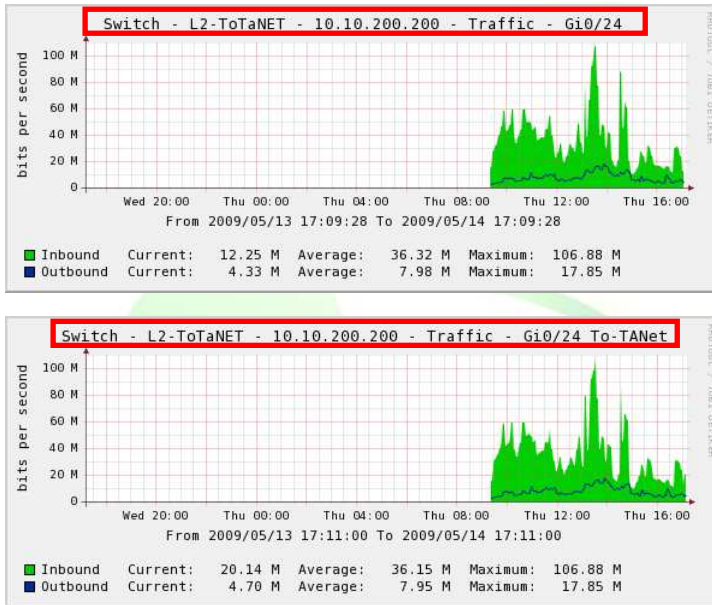
Graph Management Add

Filter by host: Search:

Graph Title**	Template Name	Size
Switch - L2-ToTaNET - 10.10.200.200 - CPU Usage	Cisco - CPU Usage	120x500
Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/19	Interface - Traffic (bits/sec)	120x500
Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/21	Interface - Traffic (bits/sec)	120x500
Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/22	Interface - Traffic (bits/sec)	120x500
Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/23	Interface - Traffic (bits/sec)	120x500
Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/24 To-TANet	Interface - Traffic (bits/sec)	120x500

Choose an action:

e. 修改標題前後圖表狀況



7.2 從資料庫修改標題

a. 使用 Webmin 修改樣圖表資料庫

點選 MySQL 資料庫伺服器 => cacti ，再選擇 graph_templates_graph 資料表

Login: root

- Webmin
- 系統
- 伺服器
 - Apache 網頁伺服器
 - MySQL 資料庫伺服器**
 - Procmail Mail Filter
 - SSH Server
 - Sendmail 組態
 - 讀取使用者郵件
- 其他
- 網路
- 硬體
- 電腦叢集

說明... 模組組態 **MySQL 資料庫伺服器** 搜尋文件

MySQL 版本 4.1.22

MySQL 資料庫

Select all. | Invert selection. | 建立一個新的資料庫

cacti mysql test

Select all. | Invert selection. | 建立一個新的資料庫

Login: root

- Webmin
- 系統
- 伺服器
 - Apache 網頁伺服器
 - MySQL 資料庫伺服器
 - Procmail Mail Filter
 - SSH Server
 - Sendmail 組態

模組索引 說明... **編輯資料庫**

cacti

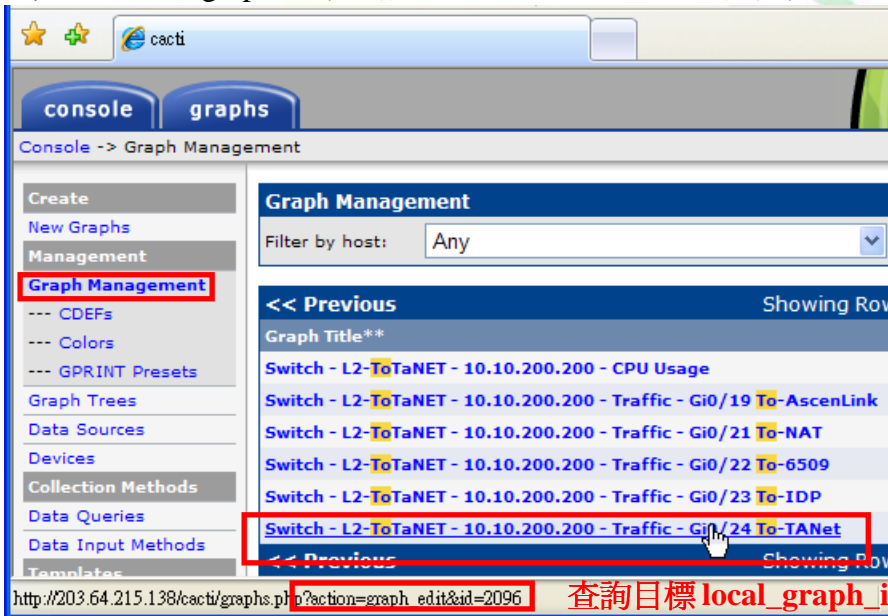
There are too many tables to display. Find tables matching:

Or edit table: **點選 Open 開啟資料表**

b. 頁面下拉至最下方，點選檢視資料



c. 從 Graph Management 查詢目標圖表的 id，然後編輯 graph_templates_graph 資料表中相同 local_graph_id 值所對應的 title、title_cache 欄位值



模組索引

資料表資料

資料表 graph_templates_graph 在資料庫 cacti

列 1 到 25 共 2110

Sorting by id, descending order

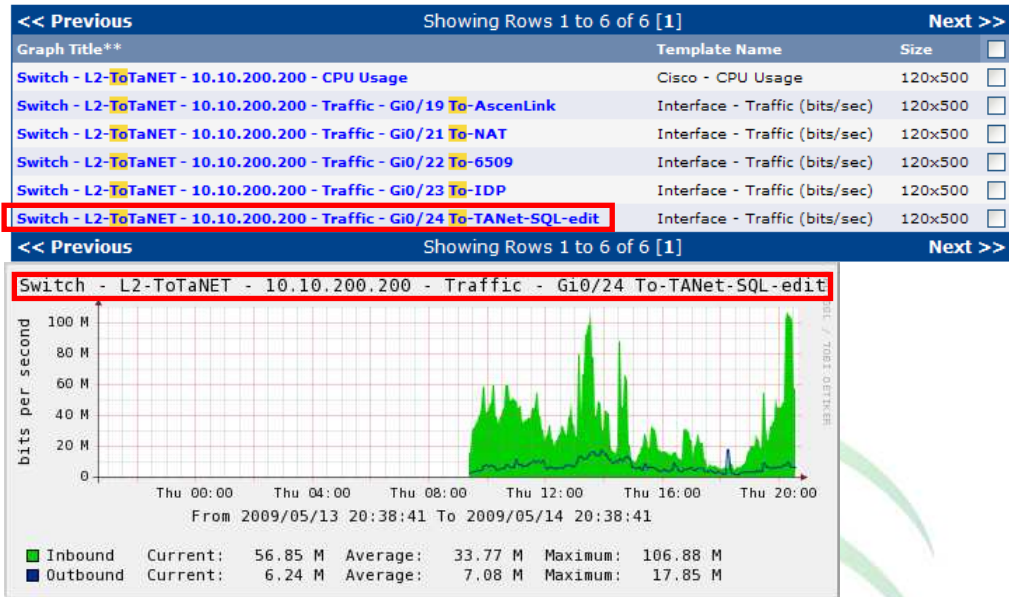
Select all. | Invert selection

id	local_graph_id	title	title_cache
<input type="checkbox"/> 2140	2097	[host_description] - CPU Usage	ToTaNET - 10.10.200.200 - CPU Usage
<input type="checkbox"/> 2139	2096	[host_description] - Traffic - [query_ifName] To-TANet	Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/24 To-TANet
<input type="checkbox"/> 2138	2095	[host_description] - Traffic - [query_ifName] To-IDP	Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/23 To-IDP
<input type="checkbox"/> 2137	2094	[host_description] - Traffic - [query_ifName] To-6509	Switch - L2-ToTaNET - 10.10.200.200 - Traffic - Gi0/22 To-6509

編輯相同 local_graph_id 值所對應的 title、title_cache 欄位值

[host_description]及[query_ifName]為 CACTI 變數，請小心修改。

d. 編輯完成



INFORMATION SERVICE

八、設備及伺服器 SNMP 設定

8.1 Linux 伺服器 SNMP 設定

```
# yum -y install net-snmp net-snmp-utils net-snmp-devel
# vi /etc/snmp/snmpd.conf
#com2sec notConfigUser default public <== 註解該行
#group notConfigGroup v1 notConfigUser <== 註解該行
#group notConfigGroup v2c notConfigUser <== 註解該行
#view systemview included .1.3.6.1.2.1.1 <== 註解該行
#view systemview included .1.3.6.1.2.1.25.1.1 <== 註解該行
#access notConfigGroup "" any noauth exact systemview none none <== 註解該行

# 定義 security name 的 SNMP Request 來源端 IP 及 Community
com2sec local localhost public
com2sec mynetwork 203.64.215.0/24 public

# 定義 group 的 SNMP 版本及擁有的 security name
group MyRWGroup any local
group MyROGroup any mynetwork

# 定義 view 所包含的 OID/MIB subtree
view all included .1 80

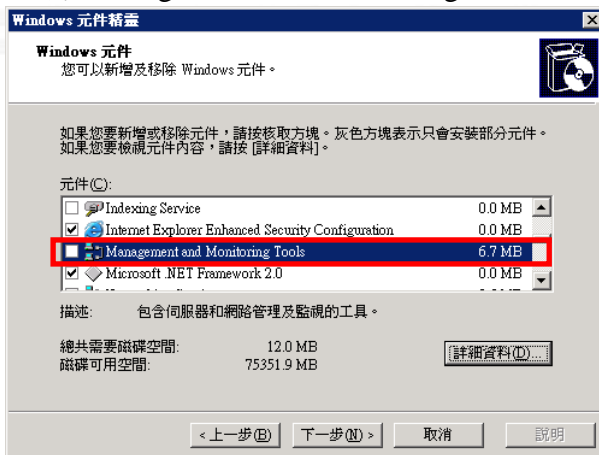
# 定義 SNMP 訪問權限
access MyROGroup "" any noauth prefix all none none
access MyRWGroup "" any noauth prefix all all all
```

8.2 Windows 伺服器 SNMP 設定

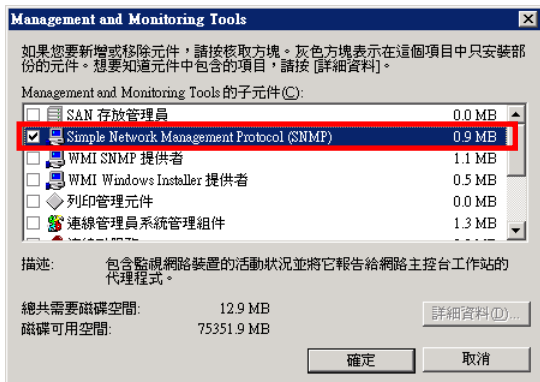
- a. 點選 控制台 => 新增移除程式 => 新增移除 Windows 元件



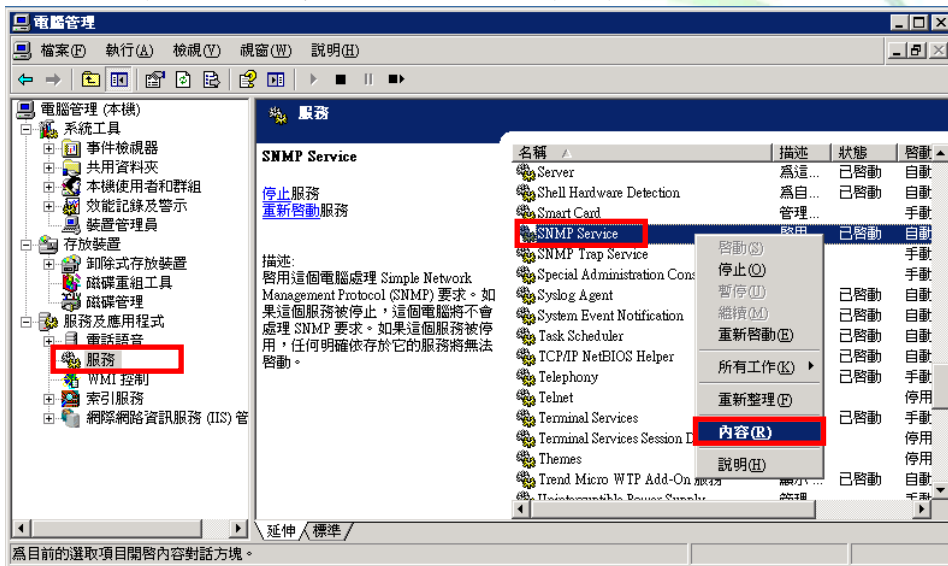
- b. 選擇 Management and Monitoring Tools，再按詳細資料



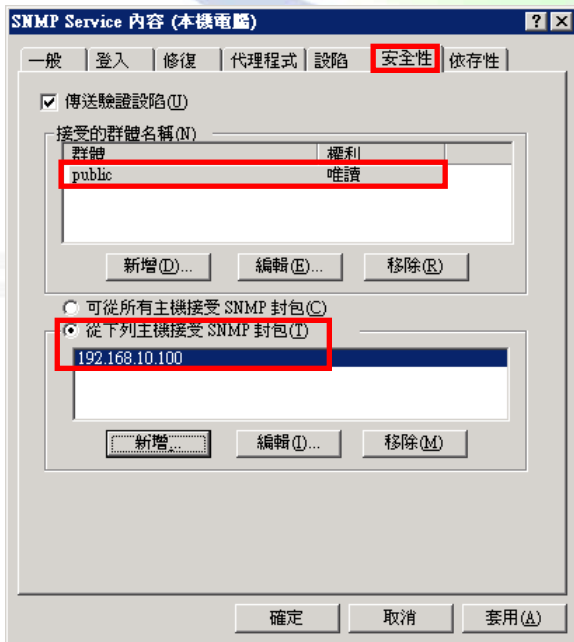
c. 勾選 Simple Network Management Protocol (SNMP)，按確定開始安裝



d. 在「我的電腦」上按右鍵，選管理，服務及應用程式 => 服務 => SNMP Service 右鍵選內容



e. 選擇安全性新增目標主機及接受的群體名稱



8.3 Cisco 交換器 SNMP 設定

Cisco SNMP v1 設定

Switch> configure terminal

Switch(config)> snmp-server community read RO

Switch(config)> snmp-server community write RW



INFORMATION SERVICE

九、CACTI 圖表中文支援

9.1 對 RRDTool 套件打上雙字元處理補丁

- a. 取得 rrdtool-1.2.23-3.el4.src.rpm，展開 srpm。

```
# wget ftp://ftp.pbone.net/mirror/download.fedora.redhat.com/pub/fedora/epel/4/SRPMS/rrdtool-1.2.23-3.el4.src.rpm
# rpm -i rrdtool-1.2.23-3.el4.src.rpm
```

- b. 解開 rrdtool-1.2.23.tar.gz，參考 [RRDTool 中文版安裝經驗](#) 及 [RRDTool 中文 Ebuild](#) 為此版本編寫 patch 檔修正 src/rrd_gfx.c 及 src/rrd_graph.c。

Patch 程式碼如下：

```
--- rrdtool-1.2.23.orig/src/rrd_gfx.c 2007-05-02 18:06:10.000000000 +0000
+++ rrdtool-1.2.23/src/rrd_gfx.c 2009-05-15 11:13:37.000000000 +0000
@@ -389,7 +389,7 @@
     int          n;
     int          error;
     int          gottab = 0;
+ // 雙字元處理 multi-bytes 問題
+ wchar_t* w_text;
#ifdef HAVE_MBSTOWCS
    wchar_t      *cstr;
    size_t       clen = strlen(text)+1;
@@ -410,6 +410,6 @@
    ft_pen.x = 0; /* start at (0,0) !! */
    ft_pen.y = 0;

    string->width = 0;
    string->height = 0;
    string->glyphs = (gfx_char) calloc (string->count,sizeof(struct gfx_char_s));
@@ -420,6 +419,6 @@
    string->transform.yx = (FT_Fixed)( sin(M_PI*(rotation)/180.0)*0x10000);
    string->transform.yy = (FT_Fixed)( cos(M_PI*(rotation)/180.0)*0x10000);
+ w_text = (wchar_t) calloc (string->count,sizeof(wchar_t));
+ // 轉換為 wide 型式
+ mbstowcs(w_text,text,string->count);
    use_kerning = FT_HAS_KERNING(face);
    previous = 0;
    glyph = string->glyphs;
@@ -448,7 +450,8 @@
    glyph->pos.x = 0;
    glyph->pos.y = 0;
    glyph->image = NULL;
- glyph->index = FT_Get_Char_Index( face, letter );
+ // 字符隻轉換
+ glyph->index = FT_Get_Char_Index( face, w_text[n]);

    /* compute glyph origin */
    if ( use_kerning && previous && glyph->index ) {
@@ -521,6 +524,7 @@
        string->width = string->bbox.xMax - string->bbox.xMin;
    } */
    string->height = string->bbox.yMax - string->bbox.yMin;
+ free(w_text);
    return string;
}

--- rrdtool-1.2.23.orig/src/rrd_graph.c 2007-05-02 18:06:10.000000000 +0000
+++ rrdtool-1.2.23/src/rrd_graph.c 2009-05-15 10:56:43.000000000 +0000
@@ -3105,8 +3105,10 @@
#endif
#ifdef HAVE_SETLOCALE
    setlocale(LC_TIME,"");

```

```

+ // 語系使用 zh_TW.UTF-8
+ setlocale(LC_ALL,"zh_TW.UTF-8");
#ifdef HAVE_MBSTOWCS
setlocale(LC_CTYPE,"");
+ // 語系使用 zh_TW.UTF-8
+ setlocale(LC_ALL,"zh_TW.UTF-8");
#endif
#endif
im->yorigin=0;

```

c. 使用 patch 修正後，可使用 rpmbuild 編譯出支援中文圖表的 rpm 檔

9.2 修改語系支援

a. 修改 apache 語系為 UTF-8

```

# vi /etc/httpd/conf/httpd.conf
AddDefaultCharset UTF-8

```

b. 修改 cacti 頁面，使其預設語系為 UTF-8

```

# vi /var/www/html/cacti/include/top_header.php
在<head></head>中加入
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">

```

9.3 在 CACTI 中設定使用的中文字型檔

a. 取得中文字型檔

```

安裝 Linux 中文字型
# yum -y install ttfonts-zh_TW


```

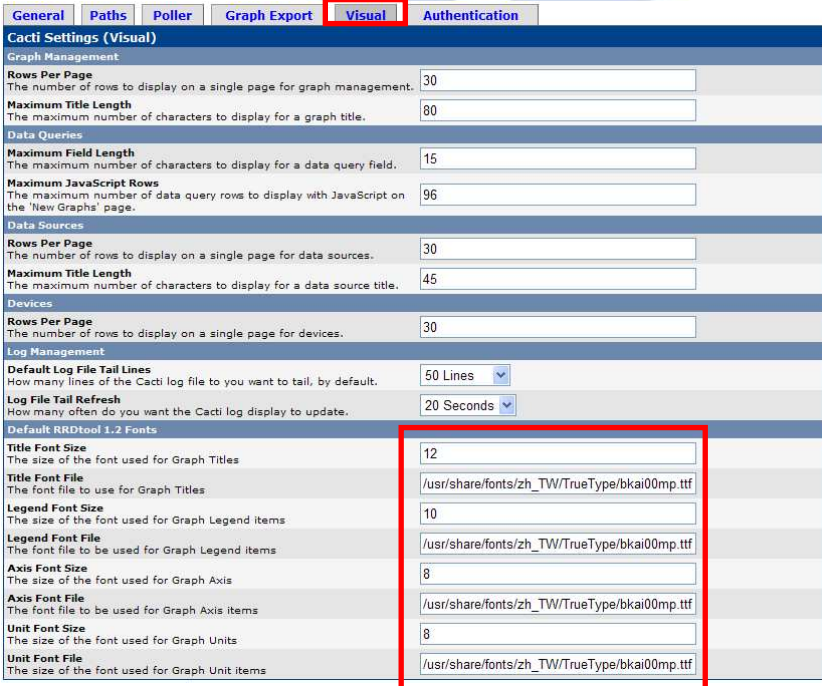
```

可得字型檔
/usr/share/fonts/zh_TW/TrueType/bkai00mp.ttf
/usr/share/fonts/zh_TW/TrueType/bsmi00lp.ttf

```

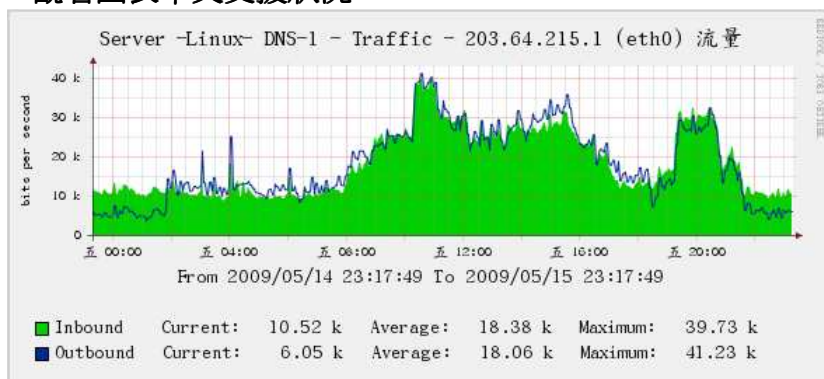
b. 設定 CACTI 使用的字型路徑

選擇  => Settings => Visual



Setting	Value
Rows Per Page	30
Maximum Title Length	80
Maximum Field Length	15
Maximum JavaScript Rows	96
Rows Per Page	30
Maximum Title Length	45
Rows Per Page	30
Default Log File Tail Lines	50 Lines
Log File Tail Refresh	20 Seconds
Title Font Size	12
Title Font File	/usr/share/fonts/zh_TW/TrueType/bkai00mp.ttf
Legend Font Size	10
Legend Font File	/usr/share/fonts/zh_TW/TrueType/bkai00mp.ttf
Axis Font Size	8
Axis Font File	/usr/share/fonts/zh_TW/TrueType/bkai00mp.ttf
Unit Font Size	8
Unit Font File	/usr/share/fonts/zh_TW/TrueType/bkai00mp.ttf

9.4 觀看圖表中文支援狀況

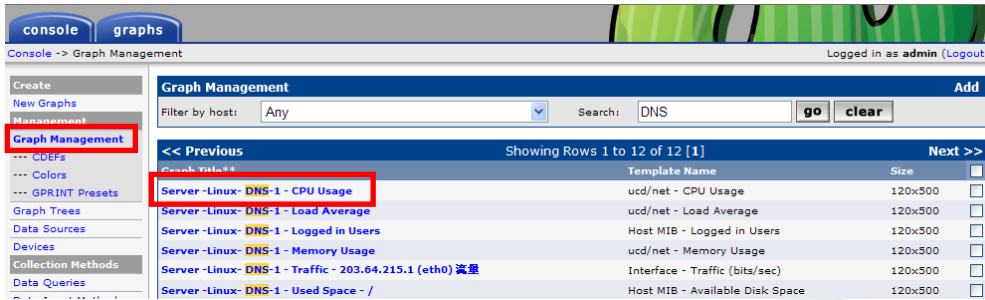


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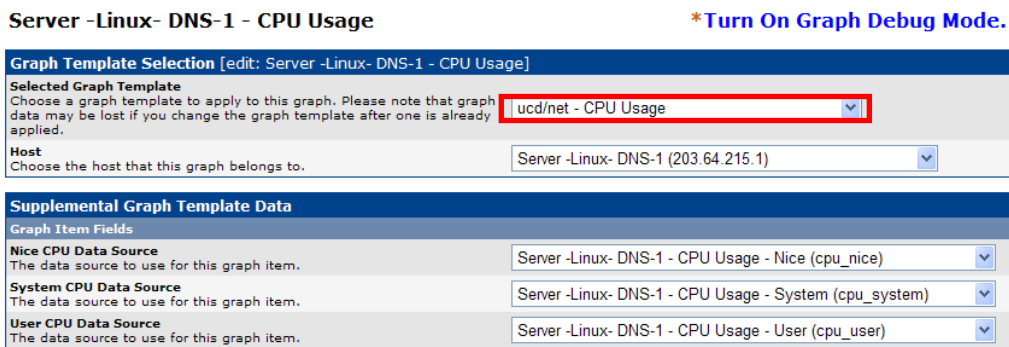
十、圖表中文化

10.1 圖表樣版(Graph Template)中文化

a. 選擇  => Graph Management => 點選目標圖表



b. 取得圖表樣版名稱



c. 選擇  => Graph Templates



d. 圖表樣版內容

Graph Template Items [edit: ucd/net - CPU Usage]					Add
Graph Item	Data Source	Graph Item Type	CF Type	Item Color	
Item # 1	(cpu_system): System	AREA	AVERAGE	FF0000	⬇ ⬆ ⬇
Item # 2	(cpu_system): Current:	GPRINT	LAST		⬇ ⬆ ⬇
Item # 3	(cpu_system): Average:	GPRINT	AVERAGE		⬇ ⬆ ⬇
Item # 4	(cpu_system): Maximum:<HR>	GPRINT	MAX		⬇ ⬆ ⬇
Item # 5	(cpu_user): User	STACK	AVERAGE	0000FF	⬇ ⬆ ⬇
Item # 6	(cpu_user): Current:	GPRINT	LAST		⬇ ⬆ ⬇
Item # 7	(cpu_user): Average:	GPRINT	AVERAGE		⬇ ⬆ ⬇
Item # 8	(cpu_user): Maximum:<HR>	GPRINT	MAX		⬇ ⬆ ⬇
Item # 9	(cpu_nice): Nice	STACK	AVERAGE	00FF00	⬇ ⬆ ⬇
Item # 10	(cpu_nice): Current:	GPRINT	LAST		⬇ ⬆ ⬇
Item # 11	(cpu_nice): Average:	GPRINT	AVERAGE		⬇ ⬆ ⬇
Item # 12	(cpu_nice): Maximum:<HR>	GPRINT	MAX		⬇ ⬆ ⬇
Item # 13	(No Task): Total	LINE1	AVERAGE	000000	⬇ ⬆ ⬇
Item # 14	(No Task): Current:	GPRINT	LAST		⬇ ⬆ ⬇
Item # 15	(No Task): Average:	GPRINT	AVERAGE		⬇ ⬆ ⬇
Item # 16	(No Task): Maximum:	GPRINT	MAX		⬇ ⬆ ⬇

Graph Item Inputs		Add
Name		
Nice CPU Data Source		✖
System CPU Data Source		✖
User CPU Data Source		✖

Template [edit: ucd/net - CPU Usage]	
Name	ucd/net - CPU Usage

Graph Template	
Title	[host_description] - CPU Usage
<input type="checkbox"/> Use Per-Graph Value (Ignore this Value)	

*註 10.1a ~ 略 ~

Vertical Label	
<input type="checkbox"/> Use Per-Graph Value (Ignore this Value)	percent

e. 修改圖表說明欄位(Graph Item)

Graph Template Items [edit graph: ucd/net - CPU Usage]	
Data Source [Field Not Templated]	ucd/net - CPU Usage - System - (cpu_system)
Color	FF0000
Graph Item Type	AREA
Consolidation Function	AVERAGE
CDEF Function	None
Value	
GPRINT Type	Normal
Text Format	System
Insert Hard Return	<input type="checkbox"/> Insert Hard Return
Sequence	1
Text Format	系統

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f. 圖表樣版修改後狀況

Graph Item	Data Source	Graph Item Type	CF Type	Item Color
Item # 1	(cpu_system): 系統	AREA	AVERAGE	FF0000
Item # 2	(cpu_system): 現值:	GPRINT	LAST	
Item # 3	(cpu_system): 平均值:	GPRINT	AVERAGE	
Item # 4	(cpu_system): 最大值:<HR>	GPRINT	MAX	
Item # 5	(cpu_user): 使用者	STACK	AVERAGE	0000FF
Item # 6	(cpu_user): 現值:	GPRINT	LAST	
Item # 7	(cpu_user): 平均值:	GPRINT	AVERAGE	
Item # 8	(cpu_user): 最大值:<HR>	GPRINT	MAX	
Item # 9	(cpu_nice): Nice	STACK	AVERAGE	00FF00
Item # 10	(cpu_nice): 現值:	GPRINT	LAST	
Item # 11	(cpu_nice): 平均值:	GPRINT	AVERAGE	
Item # 12	(cpu_nice): 最大值:<HR>	GPRINT	MAX	
Item # 13	(No Task): 總合	LINE1	AVERAGE	000000
Item # 14	(No Task): 現值:	GPRINT	LAST	
Item # 15	(No Task): 平均值:	GPRINT	AVERAGE	
Item # 16	(No Task): 最大值:	GPRINT	MAX	

Graph Item Inputs
Name
Nice CPU Data Source
System CPU Data Source
User CPU Data Source

Template [edit: ucd/net - CPU Usage]

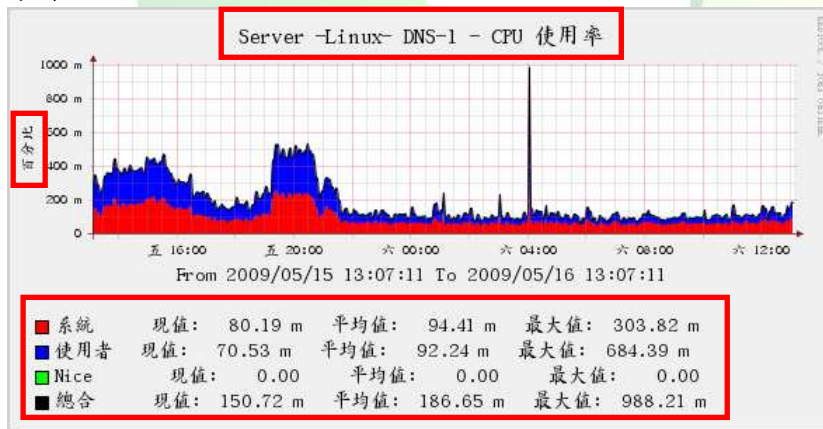
Name: The name given to this graph template.

Graph Template

Title: Use Per-Graph Value (Ignore this Value)

Vertical Label: Use Per-Graph Value (Ignore this Value)

效果：



*註 10.1a：由此修改圖表樣版時，除了勾選 Use Per-Graph Value (Ignore this Value) 的欄位外，會更新 graph_templates_graph 資料表中所有使用此樣版的資料值，因此 Data Queries 樣版如：網路介面的流量圖表 Interface - Traffic) 使用的 Graph Template 的 title 欄位應保持 Use Per-Graph Value (Ignore this Value) 為勾選狀態。關於 Data Queries 樣版的 title 欄位中文化參照 10.2 章節。

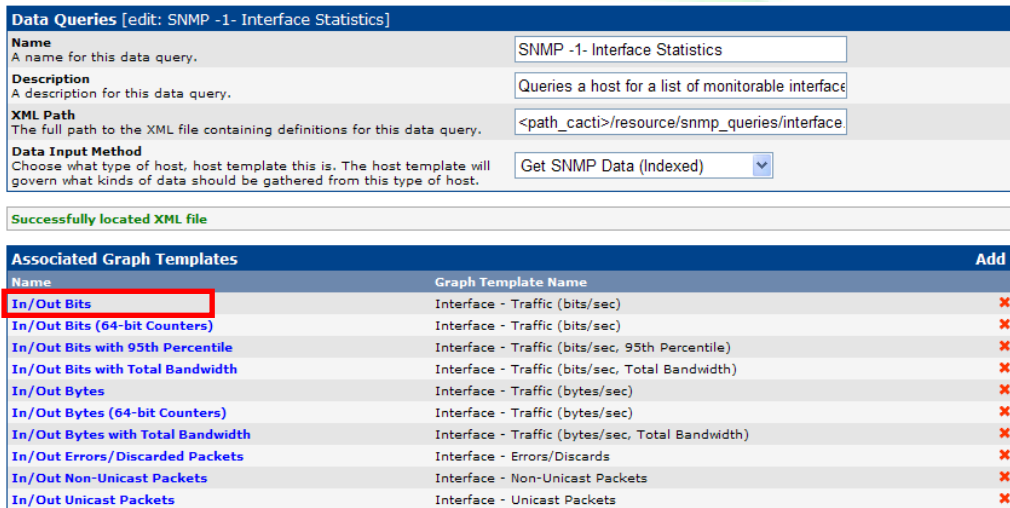
10.2 Data Queries 的圖表樣版中文化

- a. 選擇  => Data Queries => SNMP -1- Interface Statistics



Data Queries		Add
Name	Data Input Method	
SNMP -2- Get Mounted Partitions	Get Script Server Data (Indexed)	✖
Network - Get Processor Information	Get SNMP Data (Indexed)	✖
Karlnet - Wireless Bridge Statistics	Get SNMP Data (Indexed)	✖
SNMP -3- Get Processor Information	Get Script Server Data (Indexed)	✖
SNMP -1- Interface Statistics	Get SNMP Data (Indexed)	✖
Unix - Get Mounted Partitions	Get Script Data (Indexed)	✖
ucd/net - Get Monitored Partitions	Get SNMP Data (Indexed)	✖
Network - Get Available Volumes	Get SNMP Data (Indexed)	✖

- b. 選擇 Associated Graph Templates



Data Queries [edit: SNMP -1- Interface Statistics]

Name
A name for this data query.

Description
A description for this data query.

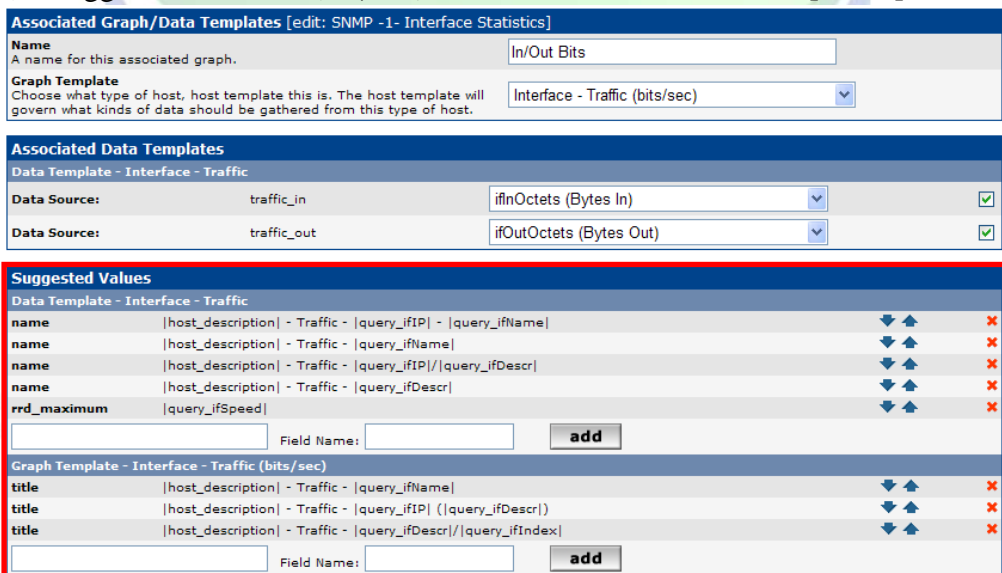
XML Path
The full path to the XML file containing definitions for this data query.

Data Input Method
Choose what type of host, host template this is. The host template will govern what kinds of data should be gathered from this type of host.

Successfully located XML file

Associated Graph Templates		Add
Name	Graph Template Name	
In/Out Bits	Interface - Traffic (bits/sec)	✖
In/Out Bits (64-bit Counters)	Interface - Traffic (bits/sec)	✖
In/Out Bits with 95th Percentile	Interface - Traffic (bits/sec, 95th Percentile)	✖
In/Out Bits with Total Bandwidth	Interface - Traffic (bits/sec, Total Bandwidth)	✖
In/Out Bytes	Interface - Traffic (bytes/sec)	✖
In/Out Bytes (64-bit Counters)	Interface - Traffic (bytes/sec)	✖
In/Out Bytes with Total Bandwidth	Interface - Traffic (bytes/sec, Total Bandwidth)	✖
In/Out Errors/Discarded Packets	Interface - Errors/Discards	✖
In/Out Non-Unicast Packets	Interface - Non-Unicast Packets	✖
In/Out Unicast Packets	Interface - Unicast Packets	✖

- c. 對 Suggested Values 進行中文化 (b 步驟中所有 Associated Graph Templates 都要中文化)



Associated Graph/Data Templates [edit: SNMP -1- Interface Statistics]

Name
A name for this associated graph.

Graph Template
Choose what type of host, host template this is. The host template will govern what kinds of data should be gathered from this type of host.

Associated Data Templates

Data Template - Interface - Traffic

Data Source: traffic_in

Data Source: traffic_out

Suggested Values		
Data Template - Interface - Traffic		
name	host_description - Traffic - query_ifIP - query_ifName	⬇ ⬆ ✖
name	host_description - Traffic - query_ifName	⬇ ⬆ ✖
name	host_description - Traffic - query_ifIP / query_ifDescr	⬇ ⬆ ✖
name	host_description - Traffic - query_ifIP	⬇ ⬆ ✖
rrd_maximum	query_ifSpeed	⬇ ⬆ ✖
<input type="text"/>	Field Name: <input type="text"/> <input type="button" value="add"/>	
Graph Template - Interface - Traffic (bits/sec)		
title	host_description - Traffic - query_ifName	⬇ ⬆ ✖
title	host_description - Traffic - query_ifIP (query_ifDescr)	⬇ ⬆ ✖
title	host_description - Traffic - query_ifDescr / query_ifIndex	⬇ ⬆ ✖
<input type="text"/>	Field Name: <input type="text"/> <input type="button" value="add"/>	

d. 中文化結果 (*註 10.2a)

Associated Graph/Data Templates [edit: SNMP -1- Interface Statistics]

Name
A name for this associated graph.

Graph Template
Choose what type of host, host template this is. The host template will govern what kinds of data should be gathered from this type of host.

Associated Data Templates

Data Template - Interface - Traffic

Data Source: traffic_in

Data Source: traffic_out

Suggested Values

Data Template - Interface - Traffic

name	host_description - 流量 - query_ifIP - query_ifName	↕ ↕	✖
name	host_description - 流量 - query_ifName	↕ ↕	✖
name	host_description - 流量 - query_ifIP / query_ifDescr	↕ ↕	✖
name	host_description - 流量 - query_ifDescr	↕ ↕	✖
rrd_maximum	query_ifSpeed	↕ ↕	✖

Field Name:


Graph Template - Interface - Traffic (bits/sec)

title	host_description - 流量 - query_ifName	↕ ↕	✖
title	host_description - 流量 - query_ifIP (query_ifDescr)	↕ ↕	✖
title	host_description - 流量 - query_ifDescr / query_ifIndex	↕ ↕	✖

Field Name:

*註 10.2a : 對 Data Queries 圖表樣版中文化只有當新增圖表時, 由此取得中文圖表標題, 而不會改變已建立的圖表標題。變更已建立的圖表標題請參照章節七、修改圖表標題及 10.1 章節中的 title 欄位 Use Per-Graph Value (Ignore this Value)用法

10.3 對圖表 Round Robin Archives 名稱中文化

a. 選擇  => Data Sources => RRAs

console | graphs

Console -> Round Robin Archives Logged in as admin (Logout)

Create	Round Robin Archives	Steps	Rows	Timespan**	Add
New Graphs	Daily (5 Minute Average)	1	600	86400	✖
Management	Weekly (30 Minute Average)	6	700	604800	✖
Graph Management	Monthly (2 Hour Average)	24	775	2678400	✖
Graph Trees	Yearly (1 Day Average)	288	797	33053184	✖

--- RRAs

b. 點擊目標項目進入修改 Name 欄位

Round Robin Archives [edit: Daily (5 Minute Average)]

Name
How data is to be entered in RRA's.

Round Robin Archives [edit: 日報表 (5 分鐘平均值)]

Name
How data is to be entered in RRA's.

Consolidation Functions
How data is to be entered in RRA's.

- AVERAGE
- MIN
- MAX
- LAST

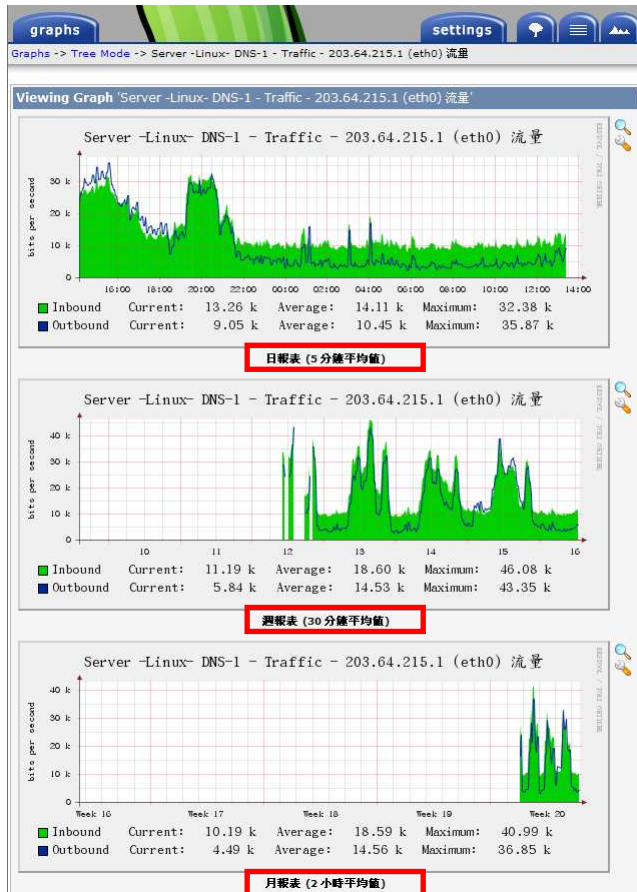
X-Files Factor
The amount of unknown data that can still be regarded as known.

Steps
How many data points are needed to put data into the RRA.

Rows
How many generations data is kept in the RRA.

Timespan
How many seconds to display in graph for this RRA.

c. 中文化結果



附錄一、常用 Linux OID/MIB 對照表

.1.3.6.1.2.1.1	SNMPv2-MIB::system
.1.3.6.1.2.1.2	IF-MIB::interfaces
.1.3.6.1.2.1.3	RFC1213-MIB::at (ip-mac-arp info)
.1.3.6.1.2.1.4	IP-MIB::ip (network info)
.1.3.6.1.2.1.5	IP-MIB::icmp (ICMP info)
.1.3.6.1.2.1.6	TCP-MIB::tcp (TCP info)
.1.3.6.1.2.1.7	UDP-MIB::udp (UDP info)
.1.3.6.1.2.1.8	RFC1213-MIB::egp (egp info)
.1.3.6.1.2.1.11	SNMPv2-MIB::snmp (SNMP info)
.1.3.6.1.2.1.25	HOST-RESOURCES-MIB::host
.1.3.6.1.2.1.25.1	HOST-RESOURCES-MIB::hrSystem
.1.3.6.1.2.1.25.1.1	HOST-RESOURCES-MIB::hrSystemUptime
.1.3.6.1.2.1.25.2	HOST-RESOURCES-MIB::hrStorage
.1.3.6.1.2.1.25.2.1	HOST-RESOURCES-MIB::hrStorageTypes
.1.3.6.1.2.1.25.2.2	HOST-RESOURCES-MIB::hrMemorySize
.1.3.6.1.4.1.2021	UCD-SNMP-MIB::ucdavis
.1.3.6.1.4.1.2021.4	UCD-SNMP-MIB::memory
.1.3.6.1.4.1.2021.10	UCD-SNMP-MIB::laTable



INFORMATION SERVICE

參考資料

酷!學園 [分享]RRDTool 中文版安裝經驗：

<http://phorum.study-area.org/index.php?action=printpage;topic=23822.0>

RRDTool 中文 Ebuild：

<http://blog.t-times.net/ada/space/start/2006-04-26/1>

使用 cacti 監測系統性能：

<http://dz.adj.idv.tw/archiver/tid-145.html>



INFORMATION SERVICE

Change Log

- 20090513 初版完成
- 20090514 新增七、修改圖表標題
- 20090515 新增八、設備及伺服器 snmp 設定
新增附錄一、常用 Linux OID/MIB 對照表
新增九、CACTI 圖表中文支援
新增參考資料
- 20090516 新增十、圖表中文化



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