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Business and technology working as one

網路即時流量分析軟體 - Cacti建置教學 2018/12/14

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Outline

About me

Cacti

- Introduction
- Install
- Setup
- Operate

Cacti Plugin

- WeatherMap
- Monitor







About me

About me

- Logicalis Group
 - Logicalis Singapore Pte. Ltd., Taiwan Branch
 - 2017.06 present
- RingLine Corporation
 - 2008.01 2017.05
- 10+ years Networking/Security experience



塵世中一個迷途小小工程師









Cacti 教學 - Introduction

What is Cacti?

- Cacti is a complete frontend to RRDTool, it stores all of the necessary information to create graphs and populate them with data in a MySQL database.
- The frontend is completely PHP driven.
- Along with being able to maintain Graphs, Data Sources, and Round Robin Archives in a database, cacti handles the data gathering.
- There is also SNMP support for those used to creating traffic graphs with MRTG.
- Latest stable version
 - v1.1.38
 - Plugin:WeatherMap not support Cacti v1.x
 - https://www.network-weathermap.com/2017/02/03/cacti-1-0-andweathermap/



Cacti is

- 它是一個具有收集資料、處理資料、儲存資料, 且具有繪圖能力的平台
- 強大的polling 能力(可以執行自訂的程式碼)
- 稍作客制化後可主動 push 資料(Agent)
- 可監控任何型態的資料,不限定網路設備
 - ex: 監控 mail 有沒有延遲,監控VM,流量分析
- 只要收得到資料, 它就可以繪圖
- Plugin 提供運用的深度







Cacti 教學 - Install Cacti

Install Cacti

Prerequisite

- CentOS/Ubuntu/FreeBSD
- Apache/Nginx
 MySQL/MariaDB
- NET-SNMP
 RRDtool
- Linux
 - CentOS : yum install cacti
 - Ubuntu : apt-get install cacti
- FreeBSD
 - /usr/ports/net-mgnt/cacti
 - make install clean



Install Cacti

CactiEZ

- CactiEZ 0.7 (English)
- CactiEZ 10.1 (簡體中文)
- Official website
 - <u>http://www.cactiez.com/</u>
- ■不保證系統乾淨、安全
 - 請自行斟酌是否使用。



Cacti Automated Installation CD

- To install press the <ENTER> key.
- Use the function keys listed below for more information.
 - Wanning: This CD will enase all curnent partitions
 - Cacti created by The Cacti Group http://cacti.net This CD provided by Jimmy Conner - http://cactiusers.org

F1-Main] [F2-Options] [F3-General] [F4-Kernel] [F5-Rescue] [F6-Details] pot: _



(64 Bit)





Cacti 教學 - Setup Cacti

Initial Cacti

http://<server-ip>/cacti

Cacti Installation Guide

Thanks for taking the time to download and install cacti, the you can start making cool graphs, there are a few pieces of c

Make sure you have read and followed the required steps need information can be found for Unix and Win32-based operation

Also, if this is an upgrade, be sure to reading the Upgrade int

Cacti is licensed under the GNU General Public License, you r

```
This program is free software; you can redistribute
GNU General Public License as published by the Free
License, or
           Cacti Installation Guide
```

This program without ever Please select the type of installation the GNU Gene New Install ٠

> The following information has been determined 'include/config.php' before continuing. RRDTool 1.2.x V

Database User: cacti Database Hostname: localhost Database: cacti Server Operating System Type: unix

Cacti Installation Guide

Make sure all of these values are correct before continuing. [FOUND] RRDTool Binary Path: The path to the rrdtool binary. /usr/bin/rrdtool [OK: FILE FOUND] [FOUND] PHP Binary Path: The path to your PHP binary file (may require a php recompile to get this file). /usr/bin/php [OK: FILE FOUND] [FOUND] snmpwalk Binary Path: The path to your snmpwalk binary. /usr/bin/snmpwalk [OK: FILE FOUND] [FOUND] snmpget Binary Path: The path to your snmpget binary. /usr/bin/snmpget [OK: FILE FOUND] [FOUND] snmpbulkwalk Binary Path: The path to your snmpbulkwalk binary.

/usr/bin/snmpbulkwalk [OK: FILE FOUND]

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

OK: FILE FOUND [FOUND] Cacti Log File Path: The path to your Cacti log file. /var/log/cacti/cacti.log [OK: FILE FOUND]

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 V

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

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

Next



First login Cacti

- http://<server-ip>/cacti
- 預設帳號/密碼:admin/admin
- 強制更改密碼







Please enter your Cactiuser name and password below:





First login Cacti

http://<server-ip>/cacti

console grapi	hs	
Console		Logged in as admin (Logout)
Create	You are now logged into Cacti. You can follow these basic steps to get started.	Version 0.8.8h
New Graphs	Create devices for network	
Management	Create graphs for your new devices	
Graph Management	View your new graphs	
Graph Trees		
Data Sources		
Devices		
Collection Methods	N	
Data Queries	v0	
Data Input Methods		
Templates		
Graph Templates		
Host Templates		
Data Templates		
Import/Export		
Import Templates		
Export Templates		
Configuration		
Settings		
Plugin Management		
Utilities		
System Utilities		
User Management		
Logout User		





Live Demo

LAB information

- Student POD
 - Pod name : cactil8-01 ~ cactil8-40
 - Use HTTP
 - http://cactil8-01.view.ncku.edu.tw/cacti/
- 預設帳號/密碼:admin/admin
- http://0rz.tw/u6QXr
- ■請依分配順序,連接自己所屬的LAB Pod。





Cacti Plugin教學 - Install Cacti plugin



Install Cacti Plugin

- WeatherMap
- Monitor



Install Cacti Plugin

Iong long ago

Must install Plugin Architecture patch

Now

- Merge Plugin Architecture into Cacti
- From 0.8.8 to the latest version.





Cacti Plugin教學 - Plugin: Monitor



Install Cacti plugin 以 monitor 為例(1)

- Cacti plugin: monitor 下載網站
 - https://docs.cacti.net/plugin:monitor#monitor
- Download
 - https://docs.cacti.net/_media/plugin:monitorv1.3-1.tgz
- Archive
 - tar zxvf plugin:monitor-v1.3-1.tgz -C /<cacti_path/plugins



Install Cacti plugin 以 monitor 為例(2)

Login Cacti -> Plugin Management

console graphs Console -> Devices -> (Edit) Create Loca New Graphs Pina Management UDP Pir Graph Management Devi Graph Trees Gene Data Sources Descr Devices Give t **Collection Methods** Hostn Data Queries Fully o Data Input Methods Host 1 Templates Choos Numb Graph Templates The n Host Templates Disab Data Templates Check Import/Export Avail Import Templates Down Export Templates The m NOTE: Configuration Ping I Settings The ty Plugin Management NOTE: Utilities Ping F TCP o System Utilities Ping 1 User Management The ti Logout User Ping F After SNMP SNMP Choos Addit Notes CALIS

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Install Cacti plugin 以 monitor 為例(3)

Install Plugin

Plugin Management (Cacti Version: 0.8.8h, Plugin Architecture Version: 3.1)							
Search:		Rows: Default 🗸 (Go Clear				
Actions	Name	Version	Load Order				
R	Monitor	1.3					
NOTE: Please sort by 'Load Order' to change plugin load ordering. NOTE: SYSTEM plugins can not be ordered.							

Enable Plugin

Plugin Management (Cacti Version: 0.8.8h, Plugin Architecture Version: 3.1)							
Search:	F	Rows:	Default 🗸 🛛 Go	Clear			

Actions	Name	Version	Load Order			
0 E	Monitor	1.3				
NOTE: Please sort by 'Load Order' to change plugin load ordering. NOTE: SYSTEM plugins can not be ordered.						



Install Cacti plugin 以 monitor 為例(4)

Install Plugin finish





Install Cacti plugin 以 monitor 為例(5)

Setting Plugin

gra

Create

New Graphs

console

Console -> Cacti Settin

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

Plugi

Utilities

System Utilities

User Management

Logout User



pl	ns monitor
gs	
	General Paths P
	Cacti Settings (Ge
	Event Logging
_	Log File Destination How will Cacti handle
	Web Events What Cacti website m
_	Poller Specific Loggin
	Poller Logging Level What level of detail d
_	Poller Syslog/Eventle If you are using the S
	Required Tool Version
	SNMP Utility Version

The type of SNMP you RRDTool Utility Versi

The version of RRDTc

SNMP Defaults

SNMP Version Default SNMP version

SNMP Community Default SNMP read co

SNMP Username (v3) The SNMP v3 Usernar

SNMP Password (v3) The SNMP v3 Passwor

SNMP Auth Protocol Choose the SNMPv3 /

SNMP Privacy Passpl Choose the SNMPv3 I

SNMP Privacy Protoc

General	Paths	Poller	Graph	Export	Visual	Authentication	<u>Misc</u>
Cacti Settings (General)							

Event Logging

Log File Destination

How will Cacti handle event logging.

General Paths Poller Graph Export Visual Authentication Misc

Cacti Settings (Misc)	
Monitor	
Alarm Sound This is the sound file that will be played when a host is down.	attn-noc.wav ~
Refresh Interval This is the time in seconds before the page refreshes. (1 - 300)	300
Icon Spacing This is how many icons to show per line. (1 - 20)	4
Show Icon Legend Check this to show an icon legend on the Monitor display	☑ Show Icon Legend
Grouping This is how monitor will group hosts.	Default ~
View This is how monitor will render hosts.	Tiles ~



Save

Install Cacti plugin 以 monitor 為例(6)

Last Refresh : 10:40:39 am









Cacti Plugin教學 - Plugin: WeatherMap

Install Cacti plugin 以 weathermap 為例(1)

- Cacti plugin: monitor 下載網站
 - https://www.network-weathermap.com/
- Download
 - https://github.com/howardjones/networkweathermap/archive/version-0.98.tar.gz
- Archive
 - tar zxvf version-0.98.tgz -C /<cacti_path/plugins



Install Cacti plugin 以 weathermap 為例(2)

Login Cacti -> Plugin Management

console graphs Console -> Devices -> (Edit) Create Loca New Graphs Pina Management UDP Pir Graph Management Devi Graph Trees Gene Data Sources Descr Devices Give t **Collection Methods** Hostn Data Queries Fully o Data Input Methods Host 1 Templates Choos Numb Graph Templates The n Host Templates Disab Data Templates Check Import/Export Avail Import Templates Down Export Templates The m NOTE: Configuration Ping I Settings The ty Plugin Management NOTE: Utilities Ping F TCP o System Utilities Ping 1 User Management The ti Logout User Ping F After SNMP SNMP Choos Addit

Install Cacti plugin 以 weathermap為例(3)

Install Plugin

Showing All Rows								
Actions	Name	Version	Load Order	Description**	Туре	Status	Author	
0	Weathermap	0.98		PHP Network Weathermap	General	Not Installed	Howard Jones	
Showing All Rows								
NOTE: Please sort by 'Load Order' to change plugin load ordering. NOTE: SYSTEM plugins can not be ordered.								

Enable Plugin

Showing All Rows								
Actions	Name	Version	Load Order	Description**	Туре	Status	Author	
l 🔁	Weathermap	0.98		PHP Network Weathermap	General	Installed	Howard Jones	
Showing All Rows								
NOTE: Please sort by 'Load Order' to change plugin load ordering. NOTE: SYSTEM plugins can not be ordered.								



Install Cacti plugin 以 weathermap 為例(4)

Install Plugin finish









Note

Official Cacti website introduction

Cacti website

- The main Cacti website provides the latest patches as well as lots of other useful information
- https://www.cacti.net/

Spine

- Spine is a high performance poller which, by far, exceeds the performance of the original cmd.php.
- https://www.cacti.net/spine_download.php



Official Cacti website introduction

Cacti Forums

- https://forums.cacti.net/
- Scripts and Templates

Cacti Issue reporting

- If you find a bug in Cacti, and the community in the forums can confirm it, you should post a bug ticket in their tracker at:
- https://www.cacti.net/issues.php
- Cacti Templates/Plugin
 - https://docs.cacti.net/templates
 - https://docs.cacti.net/plugins







Thank you.