使用 Cacti 监控你的网络

Cacti 使用手册



石头记出品

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月录;

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Cacti 使用手册

一、概述

1. cacti 是用 php 语言实现的一个软件,它的主要功能是用 snmp 服务获取数据, 然后用 rrdtool 储存和更新数据,当用户需要查看数据的时候用 rrdtool 生成图表 呈现给用户。因此, snmp 和 rrdtool 是 cacti 的关键。Snmp 关系着数据的收集, rrdtool 关系着数据存储和图表的生成。

2. Mysql 配合 PHP 程序存储一些变量数据并对变量数据进行调用,如: 主机名、主机 ip、snmp 团体名、端口号、模板信息等变量。

3. snmp 抓到数据不是存储在 mysql 中,而是存在 rrdtool 生成的 rrd 文件中(在 cacti 根目录的 rra 文件夹下)。rrdtool 对数据的更新和存储就是对 rrd 文件的处理, rrd 文件是大小固定的档案文件(Round Robin Archive),它能够存储的数据笔数 在创建时就已经定义。关于 RRDTool 的知识请参阅 RRDTool 教学。

二、Cacti 的架构及工作流程

- 保存模板、rra与主
 低力
 第四員
 調度其它模块进行工作和以及与用户的接

 成本の
 CACTI
 U
 Net-SNIMP

 数据存储以及绘图
 数据存储以及绘图
 数据存储以及绘图
 0
- 1. Cacti 的架构

2. Cacti 的工作流程



```
三、Cacti 的安装 (Linux)
```

1. 安装环境: Red Hat AS 4

2. 安装 Apache、MySQL、PHP

```
(1).安装 MySQL
```

下载地址: http://dev.mysql.com/downloads/mysql/5.0.html //查看系统中是否已经安装了 MySQL,如果是卸载所有以 mysql 开头的包。

```
# rpm -qa | grep mysql
```

```
# rpm -e mysql-*
```

//查找/etc/my.cnf (MySQL 的选项配置文件),如果有请删除它,以免影响新 安装版本的启动。

```
# rm -f /etc/my.cnf
```

```
# tar -zxvf mysql-standard-5.0.27-linux-i686-glibc23.tar.gz
```

```
# cp -rf mysql-standard-5.0.27-linux-i686-glibc23
```

/usr/local/

//建立符号链接,如果以后有新版本的 MySQL 的话,你可以仅仅将源码解压到新的路径,然后重新做一个符号链接就可以了。这样非常方便,数据也更加安全。

```
# ln -s mysql-standard-5.0.27-linux-i686-glibc23
```

```
/usr/local/mysql
```

//添加用于启动 MySQL 的用户及用户组(如果以前安装过 MySQ1,用户及用户 组可能已存在)。

- # useradd mysql
- # groupadd mysql

```
//初始化授权表
```

- # cd /usr/local/mysql
- # scripts/mysql_install_db
- //修改 MySQ1 目录的所有权
- # cd /usr/local
- # chgrp -R mysql mysql-standard-5.0.27-linux-i686-glibc23

```
# chgrp -R mysql
```

```
# chown -R mysql mysql-standard-5.0.27-linux-i686-
```

```
glibc23/data
```

```
# chown -R mysql mysql/data
# ln -s /usr/local/mysql/bin/* /usr/local/bin/
//启动 Mysql
# bin/safe mysqld --user=mysql &
//配置系统启动时自动启动 MySQ1
# cp support-files/mysql.server /etc/rc.d/init.d/mysqld
# chkconfig --add mysqld
//修改MySQL的最大连接数
# vi /etc/my.cnf
//添加以下行
[mvsald]
set-variable=max connections=1000
set-variable=max_user_connections=500
set-variable=wait_timeout=200
//max_connections设置最大连接数为1000
//max_user_connections设置每用户最大连接数为500
//wait_timeout表示200秒后将关闭空闲(IDLE)的连接,但是对正在工作的连接
不影响。
//保存退出,并重新启动MySQL
//重新启动MySQL后使用下面的命令查看修改是否成功
# mysqladmin -uroot -p variables
Password:
//可以看到以下项说明修改成功
max connections
                            1000
max user connections
                            500
wait timeout
                            200
(2). 安装 Apache
下载地址: http://httpd.apache.org/
# tar -zxvf httpd-2.2.4.tar.gz
# cd httpd-2.2.4
# ./configure --prefix=/usr/local/apache --enable-so
                    //编译时加上加载模块参数--enable-so
# make
# make install
#vi /usr/local/apache/conf/httpd.conf
//修改 Apache 配置文件, 添加 ServerName www.yourdomain.com (或 ServerName 本
```

机 ip)

vi /etc/rc.d/rc.local

//在 rc.local 上加入一行 /usr/local/apache/bin/apachectl -k start,系统启动时启动 Apache 服务。

(3).安装 PHP

先安装zlib,freetype,libpng,jpeg以便于让PHP支持GD库(Cacti的WeatherMap 插件必须要GD库的支持)

库文件下载地址: http://oss.oetiker.ch/rrdtool/pub/libs/ 1).安装 zlib

tar zlib-1.2.3.tar.gz cd zlib-1.2.3 ./configure --prefix=/usr/local/zlib make make install

2).安装 libpng

tar zxvf libpng-1.2.16.tar.tar cd libpng-1.2.16 cd scripts/ mv makefile.linux ../makefile cd .. make make install 注意,这里的 makefile 不是用./configure 生成,而是直接从 scripts/里拷一个

3).安装 freetype

tar zxvf freetype-2.3.4 .tar.gz cd freetype-2.3.4 ./configure --prefix=/usr/local/freetype make make install

4).安装 Jpeg

tar -zxf jpegsrc-1.v6b.tar.gz cd jpeg-6b/ mkdir /usr/local/libjpeg mkdir /usr/local/libjpeg/include mkdir /usr/local/libjpeg/bin mkdir /usr/local/libjpeg/lib mkdir /usr/local/libjpeg/man mkdir /usr/local/libjpeg/man1 //可以用 mkdir -p /usr/local/libjpeg/man/man1 一步创建多层目录

./configure --prefix=/usr/local/libjpeg --enable-shared --enable-static make && make install 注意,这里 configure 一定要带--enable-shared 参数,不然,不会生成共享库

5). 安装 Fontconfig

tar -zxvf fontconfig-2.4.2.tar.gz cd fontconfig-2.4.2 make make install

6).安装 GD

tar -zxvf gd-2.0.34.tar.gz cd gd-2.0.34 ./configure --with-png --with-freetype=/usr/local/freetype --withjpeg=/usr/local/libjpeg make make install 编译时显示以下信息:

** Configuration summary for gd 2.0.34:

Support for PNG library:yesSupport for JPEG library:yesSupport for Freetype 2.x library:yesSupport for Fontconfig library:yesSupport for Xpm library:noSupport for pthreads:yes

7).编辑/etc/ld.so.conf,添加以下几行到此文件中。
 /usr/local/zlib/lib
 /usr/local/freetype/lib
 /usr/local/libjpeg/lib
 /usr/local/libgd/lib
 并执行 ldconfig 命令,使用动态装入器装载找到共享库

8).安裝 libxml, RedHat AS 4 默认安装 libxml 包,但版本太低, PHP5 需要更高版本的 libxml 包。 # tar -zxvf libxml2-2.6.25.tar.gz # cd libxml2-2.6.25 # ./configure

make # make install

9).安装 PHP

PHP 下载地址: http://www.php.net/downloads.php#v5

```
tar -zxvf php-5.2.3.tar.gz
cd php-5.2.3
 # ./configure --prefix=/usr/local/php --with-
apxs2=/usr/local/apache2/bin/apxs --with-mysql=/usr/local/mysql --
with-gd=/usr/local/libgd --enable-gd-native-ttf --with-ttf --enable-gd-jis-
conv --with-freetype-dir=/usr/local/freetype --with-jpeg-
dir=/usr/local/libjpeg --with-png-dir=/usr --with-zlib-dir=/usr/local/zlib -
-enable-xml --enable-mbstring --enable-sockets
 # make
 # make install
 # In -s /usr/local/php/bin/* /usr/local/bin/
 # vi /usr/local/apache/conf/httpd.conf
查找 AddType application/x-compress .Z
    AddType application/x-gzip .gz .tgz
在其下加入 AddType application/x-tar .tgz
            AddType application/x-httpd-php .php
            AddType image/x-icon .ico
 修改 DirectoryIndex 行,添加 index.php
 修改为 DirectoryIndex index.php index.html index.html.var
# vi /usr/local/apache/htdocs/test.php
添加以下行:
<?php
     Phpinfo();
?>
wq 保存退出。
#/usr/local/apache/bin/apachectl -k stop
#/usr/local/apache/bin/apachectl -k start
在浏览器中输入: http://www.yourdomain.com/test.php 进行测试。
```

对 php 编译选项的解释:

--prefix=/usr/local/php //指定 PHP 的安装目录

--with-apxs2=/usr/local/apache2/bin/apxs //支持 Apache 模块

```
--with-mysql=/usr/local/mysql //支持 MySQI
```

--with-gd=/usr/local/libgd //支持 GD 库

--enable-gd-native-ttf //激活对本地 TrueType 字符串函数的支持

--with-ttf //激活对 FreeType 1.x 的支持

--with-freetype-dir=/usr/local/freetype //激活对 FreeType 2.x 的支持

```
--with-jpeg-dir=/usr/local/libjpeg
                                //激活对 jpeg-6b 的支持
--with-png-dir //激活对 png 的支持
--with-zlib-dir=/usr/local/zlib//激活对 zlib 的支持
--enable-mbstring //激活 mbstring 模块
--enable-gd-jis-conv //使 JIS-mapped 可用, 支持日文字体
--with-mail //支持 Mail 函数
--enable-xml
              //支持 XML
--enable-sockets
                 //支持套接字
3. 安装 RRDTool
   由于 rrdtool-1.2.23 需要一些库文件支持,故需先安装配置支持的环境,然后编译安
   装。直接运行以下 bash 脚本就可以完成安装:
   注意:将 cgilib-0.5.tar.gz、zlib-1.2.3.tar.gz、libpng-1.2.18.tar.gz、freetype-
   2.3.5.tar.gz、libart lgpl-2.3.17.tar.gz、rrdtool-1.2.23.tar.gz 放到
   /root/rrdtool-1.2.23 目录下,将脚本保存为/root/rrdtool-
   1.2.23/rrdtoolinstall.sh,并给执行权限 chmod u+x /root/rrdtool-
   1.2.23/rrdtoolinstall.sh.
   以下链接是我重新打好的一个 rrdtool-1.2.23 的安装包, 里面包括了所有用到的库文
   件和安装脚本,下载解压后执行脚本 rrdinstall.sh 即可以完成 RRDTool 的安装。
   点击下载 rrdtool-1.2.23.tar.gz
   #!/bin/sh
   BUILD_DIR=`pwd`
   INSTALL_DIR=/usr/local/rrdtool
   cd $BUILD DIR
   tar zxf cgilib-0.5.tar.gz
   cd cgilib-0.5
   make CC=gcc CFLAGS="-03 -fPIC -I."
   mkdir -p $BUILD_DIR/lb/include
   cp *.h $BUILD DIR/1b/include
   mkdir -p $BUILD_DIR/lb/lib
   cp libcgi* $BUILD DIR/lb/lib
   cd $BUILD DIR
   tar zxf zlib-1.2.3.tar.gz
   cd zlib-1.2.3
   env CFLAGS="-03 -fPIC" ./configure --prefix=$BUILD DIR/1b
   make
   make install
   cd $BUILD DIR
   tar zxvf libpng-1.2.18.tar.gz
   cd libpng-1.2.18
   env CPPFLAGS="-I$BUILD DIR/1b/include" LDFLAGS="-L$BUILD DIR/1b/1ib"
```

```
CFLAGS=″−03 −fPIC″ \
        ./configure --disable-shared --prefix=$BUILD DIR/lb
    make
    make install
    cd $BUILD DIR
    tar zxvf freetype-2.3.5. tar.gz
    cd freetype-2.2.5
    env CPPFLAGS="-I$BUILD DIR/1b/include" LDFLAGS="-L$BUILD DIR/1b/1ib"
    CFLAGS=″−03 −fPIC″ \
        ./configure --disable-shared --prefix=$BUILD DIR/lb
    make
    make install
    cd $BUILD_DIR
    tar zxvf libart lgpl-2.3.17.tar.gz
    cd libart_1gp1-2.3.17
    env CFLAGS="-03 -fPIC" ./configure --disable-shared --
    prefix=$BUILD DIR/1b
    make
    make install
    IR=-I$BUILD DIR/1b/include
    CPPFLAGS="$IR $IR/libart-2.0 $IR/freetype2 $IR/libpng"
    LDFLAGS="-L$BUILD DIR/1b/1ib"
    CFLAGS=-03
    export CPPFLAGS LDFLAGS CFLAGS
    cd $BUILD DIR
    tar zxf rrdtool-1.2.23. tar.gz
    cd rrdtool-1.2.23
    ./configure --prefix=$INSTALL_DIR --disable-python --disable-tcl &&
    make && make install
    //完成后建立符号连接
    In -s /usr/local/rrdtool/bin/* /usr/local/bin/
   //执行 rrdtool 看是否安装正确
4. 安装 net-snmp
   RedHat 默认安装了 SNMP 服务,但好象没有 snmpwalk, snmpget 这两个命令,所
   以需要编译安装 NET-SNMP。
```

NET-SNMP 官方网站: http://www.net-snmp.org/ # tar zxvf net-snmp-5.2.4.tar.gz #cd net-snmp-5.2.4

```
#./configure --prefix=/usr/local/net-snmp --enable-developer
#make
#make install
# ln -s /usr/local/net-snmp/bin/* /usr/local/bin/
#cp EXAMPLE.conf /usr/local/net-snmp/share/snmp/snmpd.conf
//修改 snmpd.conf (修改 COMMUNITY、允许抓取 snmp 数据的主机、抓取数据范围等)。
# /usr/local/net-snmp/sbin/snmpd //启动 SNMP 服务
#vi/etc/rc.d/rc.local
//在 rc.local 上加入一行/usr/local/net-snmp/sbin/snmpd,系统启动时启动 SNMP
服务。
5. 安裝 Cacti
Cacti 官方网站: www.cacti.net/
# tar -zxvf cacti-0.8.6j.tar.gz
# mv -r cacti-0.8.6j /usr/loca/apache/htdocs/cacti
# vi /usr/local/apache/htdocs/cacti/include/config.php
```

```
$database_type = "mysql";
$database_default = "cacti";
$database_hostname = "localhost";
$database_username = "cacti";
$database_password = "cacti";
```

//添加 cacti 用户

```
# useradd cacti
```

//将 rra 目录的所有权给 cacti 用户

chown -R cacti /usr/loca/apache/htdocs/cacti/rra

//修改 cacti 目录所属组

chgrp -R cacti /usr/loca/apache/htdocs/cacti

//为 cacti 用户添加 cron 任务

```
# su - cacti
```

crontab -e

*/5 * * * * /usr/local/bin/php /usr/local/apache/htdocs/cacti/poller.php

```
> /dev/null 2>&1
```

注意: 首次执行 poller.php 时请使用 cacti 用户, 否则生成的 rrd 文件 cacti 将没有 写入权限。

```
6. 安装 Cactid
```

CACTID 的安装需要以下支持:

```
    net-snmp-devel (需要编译安装 net-snmp 时添加--enable-developer 选项)
    mysql
```

```
    mysql-devel (mysql 源文件编译安装后默认支持)
```

```
○ openssl-devel (Redhat 默认安装)
```

```
# tar -zxvf cacti-cactid-0.8.6i.tar.gz
```

```
# cd cacti-cactid-0.8.6i
```

```
# ./configure --with-mysql=/usr/local/mysql --with-snmp=/usr/local/net-
snmp
   # make
   //这时你将在此目录下看到多出了 cactid、cactid.conf 两个文件
   # mkdir /usr/local/cactid
   # cp cactid cactid.conf /usr/local/cactid
   # vi /usr/local/cactid/cactid.conf
                                       //修改 cactid 配置文件
         DB_Host
                       127.0.0.1
         DB Database
                       cacti
         DB User
                        cacti
         DB Pass
                        cacti
7. 数据库配置
   #mysql -uroot -p
   Password:
   mysql> create database cacti;
   Query OK, 1 row affected (0.00 sec)
   mysql> grant all on cacti.* to cacti@localhost identified by "cacti";
   Query OK, 1 row affected (0.00 sec)
   mysql>exit
   # cd /usr/local/apache/htdocs/cacti
   # mysql -uroot -p cacti < cacti.sql</pre>
   Password:
8. 完成 cacti 的安装
   1).在浏览器中输入:http://www.yourdomain.com/cacti/
   默认用户名: admin 密码: admin
   2).更改密码
   3).设置 cacti 用到的命令路径
         snmpwalk Binary Path /usr/local/ bin/snmpwalk
         snmpget Binary Path /usr/local/ bin/snmpget
         RRDTool Binary Path
                              /usr/local/ bin/rrdtool
         PHP Binary Path
                               /usr/local/bin/php
         Cacti Log File Path
                              /usr/local/apache/htdocs/cacti/log/cacti.log
         Cactid Poller File Path /usr/local/cactid/cactid
```



	• 	cogge	u in as admin
ate	General Paths Poller Graph Export Visual	Authentication Alerting/Thold M	isc
Graphs	Cacti Settings (Paths)		
agement	Required Tool Paths		
oh Management	snmpwalk Binary Path The path to your snmpwalk binary.	/usr/local/bin/snapwalk	
a Sources	snmpget Binary Path The path to your snmpget binary.	/usr/local/bin/snmpget]
esholds	snmpbulkwalk Binary Path The path to your snmpbulkwalk binary.	/usr/local/bin/snmpbulkwalk]
athermaps lection Methods	snmpgetnext Binary Path The path to your snmpgetnext binary.	/usr/local/bin/snmpgetnext]
ta Queries ta Input Methods	RRDTool Binary Path The path to the rrdtool binary.	/usr/local/bin/rrdtool]
mplates	RRDTool Default Font Path The path to the rrdtool default true type font for version 1.2 and above.]
aph Templates st Templates ta Templates	PHP Binary Path The path to your PHP binary file (may require a php recompile to get this file).	/usr/local/bin/php	
eshold Templates	Logging		
port/Export	Cacti Log File Path The path to your Cacti log file (if blank, defaults to /log/cacti.log)	/usr/local/apache2/htdocs/cacti/log/cact	í
port Templates	Alternate Poller Path		
port Templates	Cactid Poller File Path The path to Cactid binary.	/usr/local/cactid/cactid	
Itings			
			cancel

4). 进入 cacti 后需确认更改以下位置: (如下图)

Console>Settings>General

Nev Graphs	Cacti Settings (General)		
anägeinant	Event Logging		and the second
aph Management aph Trees	Log File Destination How will Cadi handle event logging.	Logfile Only	
Aa Sources Wites Textorin Nethoda Aa Queries	Web Events What Cacti vebsite messages should be placed in the log.	□ Web SNMP Messages □ Web RRD Graph Syntex □ Graph Export Messages	
ta Input Methods	Puller Specific Logging		
nglatos aph Templates ot Templates	Poller Logging Level What level of detail do you want sent to the log file, WARNENG: Leavin in any other status than NONE or LOW can exaust your disk space rapidly.	LOW - Statistics and Errors	2
ite Templates goort/Engest sport Templates	Poller Syslog/Tventlog Selection If you are using the Syslog/Eventlog, Whet Cadt poller messages should be placed in the Syslog/Tventlog.	F Poller Statuistics F Poller Warnings F Poller Errors	
sort Templates	Required fool Versions		
erfigaeration Himge	SHAP Utâty Version The type of SMMP you have installed. Required if you are using SMMP v2c or don't have embedded SMMP support in SMP.	NET-SNOP 5. x 💌	
stem Utilities	HRDTool Utility Version The version of RRDTool that you have installed.	REDTool 1.2.x	
er Management	SIMP Defaults	Construction of the second second	
gout User	SNNP Version Default SMMP version for all new hosts.	Version	a a chaineach a a a ch
0	SNNP Community Default SNMP read community for all new hosts.	public	
ep.	SNNP Username (v3) The SNNP v3 Username for polling hosts.	T	
	SNNP Password (v3) The SNNP v3 Password for poling hosts.		
	SNNP Timeout Default SNNP timeout in milli-records.	600	
	SNNP Port Number Default UDP port to be used for SMMP Calls, Typically 161.	[16]	

Console>Settings>Poller



sole -> Cadi Setting	, · · · · · · · · · · · · · · · · · · ·		Logged in as admin (Logg
eafo	General Paths Poller Granh Export Visual	Authentication	
e Graphs	Carti Sattings (Dallar)		
nargerment.	Courses (Poner)		
h Management	Paller Enabled		
ph Trees	If you wish to stop the polling process, uncheck this box.	Poller Inabled	
a Sources	Poller Type		
lices	The Cadi poller to use. This Setting will take effect at next polling	cactid .	
ection Hethode	Puller Location Barranhan	and the second se	
a Quaries	Maximum Concurrent Baller Processes		
a Input Methods	The number of concurrent processes to execute. Using a higher number	3	
gulature	when using cmd.php will improve performance. Performance intercomments in castid are best resolved with the threads examples	15	
ph Templates	Maximum Theorem Persons		
t Templates	The maximum threads allowed per process. Using a higher number when	1	
a Templates	using cadtid will improve performance. NOTE Applies only to CACTED?		
port/Export	Script and Script Server Timeout Value The maximum time that Carli will wait on a project to complete. This	25	
port Templates	timeout value is in seconds	1	
ort Templates	Poller Host Avialability Settings		
ligaration	Downed Host Detection	Courses and a local data	
tings	The method Cacti vill use to determine if a host is available for polling. NOTE: It is recommended that, at a minimum, SNMP always be selected.	12005 - Wellable	i
inue.	Pine Type		
stem Utilities	The type of ping packet to sent. NOTE: ICMP requires that the Cacti	WDP Ping *	
er Management	Service ID have root privilages in Unix.		
pout User	Ping Timeout Value The timeout value to use for host ICMP and UDP pinging. This host SNMP timeout value applies for SNMP pings.	400	
0	Ping Ratry Count The number of times Cadi vill attempt to ping a host before failing.	1	
000	Host Up/Dawn Settings		
	Failure Count	6	
	The number of pointg intervals a nost must be down before logging an	14	

四、Cacti 的安装 (Windows)

- 一)、软件需求
 - 1、操作系统: Windows Server 2003 企业版 (或其他 NT 系统)。
 - 2、安装 Apache,当然也可以使用 IIS。
 - 3、安装 MySQL, 下载 MySQL 的 Windows 版本并安装到 c:/mysql 文件夹下。
 - 4、安装 PHP,从 www.php.net 下载 PHP 5.X 并安装到 c:/php 文件夹下。
 - 5、安装 RRDTool,从 www.cacti.net 下载 Cygwin 版 RRDTool 并安装到 c:/cacti 文件夹下。
 - 6、安装 Net-SNMP, 下载 Net-SNMP 并安装到 c:/net-snmp 文件夹下。
 - 7、安装 Cacti,将下载的 Cacti 压缩文件解压到 WEB 目录下,并改名为 cacti。
 - 8、安装 Cactid,将下载的 Cactid 压缩文件解压到 c:/cacti 文件夹下。
 - 9、安装 Cygwin,从 Cygwin 站点下载 setup.exe 文件,安装 cygwin 到 c:/cygwin 文件夹下。
 - 10、安装 ActivePerl,有些脚本是用 perl 语言写的,所以需要 ActivePerl 的支持。
- 二)、Windows 下 Apache、PHP、MySQL 的安装
 - 1、安装 Apache

点击安装文件 apache_2.2.4-win32-x86-no_ssl.msi 将 apache 安装在 c:\apache 目录 下(随自己喜好)。

2、安装并配置 MYSQL

在 windows 下安装 Mysql 比较简单,和正常软件一样,下一步下一步就可以了,但最好把它的安装目录设置短一点,如: C:\mysql;安装成功后会有一个配置向导,如下图所示配置。





ySQL Server Instanc	e Configuration Tizard	×			
MySQL Server Instance Configure the MySQL Se	e Configuration erver 5.0 server instance.				
Please select a server ty	Please select a server type. This will influence memory, disk and CPU usage.				
This is a development machine, and many other applications will be run on it. MySQL Server should only use a minimal amount of memory.					
Server Machine					
Several server applications will be running on this machine. Choose this option for web/application servers. MySQL will have medium memory usage.					
O Dedicated MySQL Server Machine					
This machine is dedicated to run the MySQL Database Server. No other servers, such as a web or mail server, will be run. MySQL will utilize up to all available memory.					
	< Back Next > Cancel Cancel				



SQL Server Instance Configuration Tizard	×			
MySQL Server Instance Configuration Configure the MySQL Server 5.0 server instance.	\bigcirc			
Please select the database usage.				
O Multifunctional Database				
General purpose databases. This will optimize the server for the use of the fast transactional InnoDB storage engine and the high speed MyISAM storage engine.				
Transactional Database Only				
Optimized for application servers and transactional web applications. This will make InnoDB the main storage engine. Note that the MyISAM engine can still be used.				
🔿 Non-Transactional Database Only				
Suited for simple web applications, monitoring or logging applications as well as analysis programs. Only the non-transactional MyISAM storage engine will be activated.				
< Back Next > Cancel				

BySQL Server Instance Configuration Wizard				
MySQL Server Instance Configuration Configure the MySQL Server 5.0 server instance.				
Please select the drive for the InnoDB datafile, if you do not want to use the default settings. InnoDB Tablespace Settings Please choose the drive and directory where the InnoDB tablespace				
C: Installation Path				
Drive Info Volume Name: File System: NTFS				
7.7 GB Diskspace Used 11.9 GB Free Diskspace				
< Back				









TySQL Server Instance Configuration Tizard
MySQL Server Instance Configuration Configure the MySQL Server 5.0 server instance.
Please set the networking options.
Enable TCP/IP Networking Enable this to allow TCP/IP connections. When disabled, only local connections through named pipes are allowed. Port Number: 3306
Please set the server SQL mode.
Enable Strict Mode This option forces the server to behave more like a traditional database server. It is recommended to enable this option Cancel < Back

∎ySQL Server I	nstance Confi	guration Tizard	×	
MySQL Server Instance Configuration Configure the MySQL Server 5.0 server instance.				
Please set the	Windows options.			
🔽 Install As	Windows Service	e		
(Ora	This is the recomm on Windows.	nended way to run the MySQL server		
	Service Name:	MySQL		
		Launch the MySQL Server automatically		
🔽 Include Bi	n Directory in Wi	indows PATH		
MySQLa	Check this option server / client exe so they can be ca	to include the directory containing the ecutables in the Windows PATH variable illed from the command line.		
		PEMAG		
		< Back Next > Cancel		



ySQL Server Instance Configuration Tizard					
MySQL Server Instance Configuration					
Configure the	Configure the MySQL Server 5.0 server instance.				
Please set the	e security options.				
Modify Se	ecurity Settings				
	New root password:	*****	Enter the root password.		
root	Confirm:	*****	Retype the password.		
	Enable root access from remote machines				
🔲 Create An	Anonymous Account				
This option will create an anonymous account on this server. Please					
20MAG					
< Back Next > Cancel Ca					

SQL Server Instance Configuration Tizard
MySQL Server Instance Configuration
Configure the MySQL Server 5.0 server instance.
Processing configuration
Prenare configuration
Apply security settings
Please press [Execute] to start the re-configuration.
Note that this will shutdown/restart the instance if it is already running. All users will be disconnected.
< Back Cancel Cancel

点击 Execute 按钮完成 MySQL 的安装配置。

如果 MySQL 出现拒绝访问情况时,请在 c:\和 c:\mysql 下查找 my. cnf 文件并将其删除 后重启 MySQL。

3、安装并配置 PHP

1)、安装 PHP

把 php-5.2.1-Win32.zip 解压到 c:\php 目录中,并设置环境变量如下图所示。

编辑系统变量	<u>?</u> ×
变量名(M):	MIBDIRS
变量值 (V):	C:\php\extras\mibs
	确定 取消
	WWW.PCHAE.COM.CN

新建系统变量:变量名:MIBDIRS,变量值:c:\php\extras\mibs;

编辑系统变量			<u>? ×</u>
变量名(M):	PHPRC		
变量值(V):	c:\php		
		确定	取消
			WWW.PCHAR.COM.CN

新建系统变量:变量名:PHPRC,变量值:c:\php;

编辑系统变量	<u>? ×</u>				
变量名(N):	Path				
变量值(V):	\bin; <mark>c:\php;c:\php\ext;</mark> C:\mysql\bin				
	确定 取消				
	WWW.PCMAE.COM.CN				

编辑系统变量 Path, 增加 ";c:\php;c:\php\ext;"

2)、配置 PHP

```
将 c:\php 目录中的 php. ini-dist 重命名为 php. ini, 编辑 php. ini 文件, 找到
extension_dir = "./" 改为 extension_dir = "c:/php/ext", 找到
; extension=php_mysql. dll
; extension=php_snmp. dll
; extension=php_sockets. dll
将';'去掉改为
extension=php_mysql. dll
extension=php_sockets. dll
cgi. force_redirect = 0
3) 、配置 Apache
在 Apache 的安装目录下找到并打开 conf\httpd.conf 文件,
找到 #LoadModule ssl_module modules/mod_ssl.so 这行,在此行后加入一行
```



LoadModule php5_module c:/php/ php5apache2_2.dll, 其中 c:/php/ php5apache2_2.dll 为你 php 目录中 php5apache2_2.dll 所在的位置 找到 AddType application/x-gzip .gz .tgz 这行,在此行后加入一行 AddType application/x-httpd-php .php 找到 DirectoryIndex index.html 在后面加入 index.htm index.php 4)、测试 PHP 是否安装成功 此时 PHP 环境已经配置成功,在 WEB 根目录(如我的 c:/Apache/htdocs)里建一个名为 test.php 的文件内容如下 <?php phpinfo(); ?> 重新启动 apache 服务

用浏览器打开 http://localhost/test.php 如果可以看到如下图所示的 php 配置输出信息 就 OK 了。

PHP Version 5.2.1



System	Windows NT HXSD-BUJTX0U9XX 5.2 build 3790	
Build Date	Feb 7 2007 23:10:31	
Configure Command	cscript /nologo configure.js "enable-snapshot-build" "with-gd=shared"	
Server API	Apache 2.0 Handler	
Virtual Directory Support	enabled	
Configuration File (php.ini) Path	:\php\php.ini	
PHP API	20041225	
PHP Extension	0060613	
Zend Extension	220060519	
Debug Build	no	
Thread Safety	enabled	
Zend Memory Manager	enabled	
IPv6 Support	enabled	
Registered PHP Streams	php, file, data, http, ftp, compress.zlib	
Registered Stream Socket Transports	tcp, udp	
Registered Stream Filters	convert.iconv.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, zlib.*	

This program makes use of the Zend Scripting Language Engine: Zend Engine v2.2.0, Copyright (c) 1998-2007 Zend Technologies





三)、安装 RRDTool 下载 RRDTool: http://www.cacti.net/downloads/rrdtool/win32/ 下载完成后解压缩,并解压出来的文件夹里的所有文件复制到c:/cacti下。

四)、安装 Net-SNMP

下载 Net-SNMP: http://net-snmp.sourceforge.net/

下载最新版本的Win32安装文件,并将它安装到C:/net-snmp下。

五)、安装 cactid

下载Cactid: http://www.cacti.net/downloads/cactid/packages/Windows/ 解压 Cactid,并将解压出的文件夹了的所有文件复制到 c:/cacti 下,并修改 cactid.conf 文件。

DB_Host 127.0.0.1 or hostname (请勿输入 localhost) DB_Database cacti

DB User cacti

DB_Password cacti

DB Port 3306

六)、安装 Cygwin

从 Cygwin 站点下载 setup.exe 文件, 安装 cygwin 到 c:/cygwin 文件夹下。

- 1)、运行刚下载的 setup.exe
- 2)、选择以下安装包进行安装

Base (include all items)
Libs
 libart_lgpl
 libfreetype26
 libpng12
 zlib
 openssl
Utils
 patch
Web
 wget

3) 、添加 c:\cygwin\bin 到你的 PATH 系统变量中。

七)、安装 ActivePerl

下载最新版本的 ActivePerl for windows 并安装。

下载地址: http://www.activestate.com/Products/Download/Download.plex?id=ActivePerl 安装完成后不要忘记将ActivePerl 的执行文件目录添加到你的 PATH 系统变量中。

八)、安装并设定 cacti

下载最新版本 cacti: http://www.cacti.net/downloads/ 1)、解压下载的文件到 WEB 目录下

2)、打开命令提示符 CMD,在 MySQL 里新建数据库 cacti 并将 cacti.sql 导入到数据 库中。

```
C:\>mysql -uroot -p
Password:
mysql> create database cacti;
Query OK, 1 row affected (0.00 sec)
```

mysql> grant all on cacti.* to cacti@localhost identified by "cacti"; Query OK, 1 row affected (0.00 sec)

```
mysql>flush privileges;
mysql>exit
C:\>
C:\>mysql -uroot -p cacti < c:\apache\htdocs\cacti\cacti.sql
Password:
```

- 3)、修改 cacti_web_root/cacti/include/config.php 配置文件。
 \$database_default = "cacti";
 \$database_hostname = "localhost";
 \$database_username = "cacti";
 \$database_password = "cacti";
 \$database_port = "3306";
- 4)、打开浏览器输入 http://your-server/cacti/install 点击 New Install,然后点下一步之后这里需要输入 rrdtool、php、snmpwalk、 snmpget、cactid 的位置,请依照上面的安装路径进行设置。
 PHP Binary Path: c:/php/php.exe

RRDTool Binary Path: c:/cacti/rrdtool.exe

```
SNMPGET, SNMPWALK, SNMPBULKWALK, SNMPGETNEXT Paths:
c: net-snmp/usr/bin/snmpget.exe
c: net-snmp/usr/bin/snmpwalk.exe
c: net-snmp/usr/bin/snmpbulkwalk.exe
c: net-snmp/usr/bin/snmpgetnext.exe
```

Cacti Logfile Path: c:/apache/htdocs/cacti/log/cacti.log

Cactid Path: c:/cacti/cactid.exe

所有路径都是此安装程序的绝对路径

如果事后无法显示出图形请到 Console → Settings → General → RRDTool Utility Version 将它改成 RRDTool 1.2x 如果有图却没有文字的话,请到 paths 里的 RRDTool Default Font Path c:/windows/fonts/arial.ttf 注意:如果系统是 Windows 2003 Server 请将 C:\WINDOWS\system32\cmd.exe 及 rrdTool 跟 netsnmp 的*.exe 加入 IIS 的 使用者读取权限,此举对系统有一定的危险性,如果无相关对策请更改作 system。

- 5)、登录的帐号和密码都是admin,登录后需要立即修改密码。
- 6)、进入 cacti 后需确认更改以下位置: (如下图)

Console>Settings>General



Console>Settings>Poller



console grag	phs		
cale -> Cacti Setting	, K		Logged in as admin (Logsut)
nato -	General Paths Poller Graph Export Visual	Authentication	
Graphs	Cacti Settings (Paller)		
alegen work	Lange al		
ph Management	Poller Foabled	-	
ph Trees	If you wish to stop the polling process, uncheck this box.	Poller Enabled	
a Sources	Poller Type		
lices	The Cadi poller to use. This Setting will take effect at next polling	cactid .	
ection Hethode	Puller Location Receivaban	and the second se	
a Quaries	Maximum Concurrent Boller Processes		
a Input Methods	The number of concurrent processes to execute. Using a higher number	13	
gelature	when using cmd.php will improve performance. Performance	15	
ph Templates	Humpsversenants in cause are been reserved with the orreads parameter		
t Templates	The maximum threads allowed per process. Using a higher number when	1	10000000
a Templates	using cadtid will improve performance. NOTE Applies only to CACTED!		
part/Export	Script and Script Server Timeout Value	04	
port Templates	timeout value is in seconds	1-0	
ort Templates	Poller Host Availability Settings		
ligeration	Downed Host Detection	r	
tings	The method Cacti vill use to determine if a host is available for polling. NOTE: It is recommended that, at a minimum, SNMP always be selected.	SMMP - Reliable	1
See and the second second	Ping Type	Free all and a second s	
tern Utilities	The type of ping packet to sent. NOTE: ICMP requires that the Cacti	ODP Ping M	
r Management	Bende to nave root privilages in crist.		
out User	The timeout value to use for host ICMP and UDP pinging. This host SNMP timeout value applies for SNMP pings.	400	
0	Ping Ratry Count The number of times Cads will attempt to ping a host before failing.	1	
0	Host Up/Down Settings		and a second
09	Failure Count The number of polling intervals a host must be down before logging an	2	

删除 Localhost devices,添加一个新的 Windows LocalHost,或者修改 Host Template

为 Windows 2000/XP。

启动本机 SNMP

如果您也要侦测本机的 snmp 状态请用它

开始 → 控制面板 → 添加删除程序 → 添加删除 Windows 组件 → Management and Monitoring Tools (管理和监控工具) → Simple Network Management Protocol (简单网络管理协议) → 将它打勾后点击确定来启用它.

7)、测试 cacti 是否安装正确

打开命令提示符(CMD),输入c:/php/php.exe c:/cacti_web_root/cacti/poller.php 看是否输出下面类似信息:

C:\>c:/php/php.exe c:/cacti_web_root/cacti/poller.php

OK u:0.00 s:0.06 r:1.32

OK u:0.00 s:0.06 r:1.32

OK u:0.00 s:0.16 r:2.59

OK u:0.00 s:0.17 r:2.62

10/28/2005 04:57:12 PM - SYSTEM STATS: Time:4.7272 Method:cmd.php

Processes:1 Threads:N/A Hosts:1 HostsPerProcess:2 DataSources:4

RRDsProcessed:2

在测试时如果错现 snmp 模块丢失错物可以试着将 MIBDIRS 设为: C:\net-snmp\usr\share\snmp\mibs

编辑系统变量	<u>?×</u>
变量名(M):	MIBDIRS
变量值(V):	c:\net-snmp\usr\share\snmp\mibs
	确定 現消 AG

之后应该确定 cacti.log 文件在 cacti_web_root/cacti/log/下出现, *.rrd 文件在 cacti_web_root/cacti/rra/下出现。

8)、定时执行命令

点击开始→控制面板→任务计划→添加任务计划→浏览 c:\php\php.exe 设置成每天执行, 高级里面选每5分钟执行一次,持续24小时;再返回到属性的首页,运行(R)改成 C:\php\php.exe C: /Apache/htdocs/cacti/poller.php 起始于改成 C: /Apache/htdocs/cacti 当输入用于执行此任务计划的用户名和密码时,请注意你输入的用户有读和写以下目录的权限:

cacti_web_root/cacti/rra

cacti_web_root/log

并确认用户有读、写和执行以下目录文件的权限:

- c:\php
- c:\php\sapi

五、Cacti的使用

1. 界面介绍

登陆Cacti后,可以看到左上角是两个选项卡,"console"和"graphs"。console表示控制 台,在此进行所有的配置等操作;而graphs则是用来查看所有服务器的性能图像的界面。

console grap	phs
Console	
Create New Graphs	You are now logged into Cacti. You can follow
Management Graph Management Graph Trees Data Sources Devices Collection Methods	 Create devices for network Create graphs for your new devices View your new graphs
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	

2. console菜单

 $\mathit{Create:}$

New Graphs——创建新图像的快捷方式;

Management:

Graph Management——图像管理。可以在此删除、复制图像,Cacti会自动创建图像。不过如果我们有特殊的需要,比如将几张图上的数据合并在一张图像上的话也可以在此手工新建图像;

Graph Trees——图像树。在graphs界面里,图像或devices是树状结构显示的,可以在此 设置树的结构;



Data Sources——管理rrd文件。一般无需修改, Cacti会自己创建rrd文件;

console gra	phs				
onsole -> Data Source	5			Logged in as admin (L	ogout
Create	Data Sources [host: 127.0.0.1]				Add
New Graphs Management	Select a host: Localhost (127.0.0.1)	Search:		go clear	
Graph Management	<< Previous	Showing Rows 1 to 30 o	f 48 [1	21 Nex	d >>
Graph Trees	Name**	Data Input Method	A chiuo	Tomplate Name	
Data Sources	Localbest - Advanced Ding	DING - Advanced Ding ut 2	Yes	DING - Advanced Ding ut 2	
RRAs	Localities Advanced Ping	PING - Advanced Ping VI.3	Tes	PING - Advanced Ping VI.3	
Devices	Localnost - Advanced Ping	PING - Advanced Ping V1.3	res	PING - Advanced Ping V1.3	
Collection Methods	Localhost - Advanced Ping	PING - Advanced Ping v1.3	Yes	PING - Advanced Ping v1.3	
Data Queries	Localhost - Apache Statistics	WebServer - Apache Statistics	Yes	WebServer - Apache Statistics	
Data Input Methods	Localhost - Apache Statistics	WebServer - Apache Statistics	Yes	WebServer - Apache Statistics	
Templates	Localhost - Apache Statistics	WebServer - Apache Statistics	Yes	WebServer - Apache Statistics	
Graph Templates	Localhost - Apache Statistics	WebServer - Apache Statistics	Yes	WebServer - Apache Statistics	
Host Templates	Localhost - Apache Statistics	WebServer - Apache Statistics	Yes	WebServer - Apache Statistics	Г
Data Templates	Localhost - Apache Statistics	WebServer - Anache Statistics	Yes	WebServer - Anache Statistics	
Import/Export	Localhost - Free Space - /dev /mapper /Vol	Get Script Data (Indexed)	Yes	Unix - Hard Drive Space	
Import Templates	Localhost - Index/Isage	teMuSOL - Index Lisage	Yes		
Configuration	Localhost - Load Average	Upix - Get Load Average	Yes	Lipix - Load Auerage	
Settings	Localhost - Load Average	Cot SNMD Data	Vec	und/pot - Lood Average - 1 Minute	
Utilities	Localitiest - Load Average - 1 Minute	Get ONMP Data	Vee	ucd/net - Load Average - 1 Minute	
System Utilities	Localnost - Load Average - 15 Minute	Get SNMP Data	res	ucd/net - Load Average - 15 Minute	
User Management	Localhost - Load Average - 5 Minute	Get SNMP Data	Yes	ucd/net - Load Average - 5 Minute	
Logout User	Localhost - Locking and Slow	teMySQL - Locking and Slow	Yes	teMySQL - Locking and Slow	
2'	Localhost - Logged in Users	Unix - Get Logged In Users	Yes	Unix - Logged in Users	
<u> </u>	Localhost - Memory - Buffers	Get SNMP Data	Yes	ucd/net - Memory - Buffers	
	Localhost - Memory - Cache	Get SNMP Data	Yes	ucd/net - Memory - Cache	

Devices——设备管理。这是我们最经常需要修改的地方,可以在此创建新的设备或修改其

名称等信息。

Collection Methods

Data Queries 和Data Input Methods是采集数据的方式,一般我们无需对这两项进行修改;

Templates

Graph Templates、Host Templates和Data Templates 分别是图像模板、主机类型模板和数据模板。这些模板可以导出、导入也可以自己编写,一般无需修改。

Import/Export

Import Templates 和Export Templates,对上述模板的导入、导出。我们可以在Cacti的 官方网站上找到这些模板,不过需要注意模板对于的Cacti的版本。

Configuration

Settings ——Cacti的主要配置菜单;

可以在此重新设置对应的程序的路径、版本等信息。也可以设置图像的输出方式(允许ftp)、显示效果、登陆方式(允许使用LDAP)等。

Utilities

System Utilities ——显示Cacti系统的一些cache和log信息,如果log文件太大建议直接 到后台查看;

User Management ——用户管理。可以在此添加、删除用户,并对每个用户设置详细的权限;

Logout User ——注销用户。

3. 创建监测点

假设被监测的服务器名叫"Test Host", IP为192.168.100.110, SNMP的community为 public。

进入Cacti的console面板->

点击 "Devices" 进入设备面板 ->

console gra	phs			
Console -> Devices			Logge	d in as admin (Logout)
Create	Devices			Add
New Graphs Management	Type: Any	Status: Any Search:		go clear
Graph Trees Data Sources	<< Previous	Showing Rows 1 to 1 of 1 [1]		Next >>
Devices	Description	Status Hostname ^{Curr} ent (ms)	Average (ms)	Availability** 📕
Collection Methods	Localhost	Up 127.0.0.1 17.49	4.61	99.52% 🗖
Data Input Methods	<< Previous	Showing Rows 1 to 1 of 1 [1]		Next >>
Templates	L 4	Choose an action: Delete		▼ go

点击"Add"添加新设备->



Canada en Daviana en (Edit)		Leaged in as admin (League)
console -> Devices -> (i			Logged in as admin (Logod)
Create	Devices [new]		
New Graphs	Description	Test host	
Management	Give this host a meaningful description.	liest nost	
Graph Management	Hostname	192.168.100.110	
Graph Trees	ni in the fully qualified hostifame for this device.	•	
Data Sources	Choose what type of host, host template this is. The	Local Linux Machine	
Devices	host template will govern what kinds of data should be	Local Flux machine	
Collection Methods	gathered from this type of host.		
Data Queries	Check this box to disable all checks for this host.	🗖 Disable Host	
Data Input Methods	SNMP Options		
Templates	SNMP Community	public	
Graph Templates	Fill in the SNMP read community for this device.	public	
Host Templates	SNMP Username (v3) Fill in the SNMP v3 username for this device.		
Data Templates	SNMD Descuord (v3)		
Import/Export	Fill in the SNMP v3 password for this device.		
Import Templates	SNMP Version	Version 1	
Export Templates	Choose the SNMP version for this host.	FOLDION 1	
Configuration	SNMP Port	161	
Settings	161).	101	
Utilities	SNMP Timeout		
System Utilities	The maximum number of milliseconds Cacti will wait	500	
User Management	support).	•	
Logout User			
			cancel create
<u> </u>			

填写要监测服务器的各种信息,其中Host Template请选择"Local Linux Machine"或 "ucd/net SNMP Host"(选择一个合适的主机模板) ->

点击"Create"保存信息,如果SNMP连接没有问题,左上角会出现该服务器的信息,否则会出现"SNMP error"的红色字样->

console grapi	hs	
Console -> Devices -> (Ed	dit)	Logged in as admin (Logout)
Create New Graphs Management Graph Management Graph Trees Data Sources	Test host (192.168.100.110) SNMP Information System: Linux mymce 2.6.9-42.ELsmp #1 SHP Wed Jal 12 23:27:17 EDT 200 Wptime: 171966 (0 days, 0 hours, 28 minutes) Hostaname: mymce Location: Unknown (edit /stofsamp/sampl.conf) Contact: Root root@localhost (configure /stofsamp/samp.local.conf)	*Create Graphs for this Host
Devices	Devices [edit: Test host]	
Collection Methods Data Queries	Description Give this host a meaningful description.	Test host
Data Input Methods	Hostname Fill in the fully qualified hostname for this device.	192. 168. 100. 110
Graph Templates Host Templates	Host 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.	Local Linux Machine
Data Templates Import/Export	Disable Host Check this box to disable all checks for this host.	Disable Host
Import Templates	SNMP Options	
Export Templates Configuration	SNMP Community Fill in the SNMP read community for this device.	somode
Settings	SNMP Username (v3) Fill in the SNMP v3 username for this device.	
System Utilities	SNMP Password (v3) Fill in the SNMP v3 password for this device.	
User Management	SNMP Version Choose the SNMP version for this host.	Version 1 -
	SNMP Port Enter the UDP port number to use for SNMP (default is 161).	161
	SNMP Timeout The maximum number of milliseconds Cacti will wait for an SNMP response (does not work with php-spmp support).	500

点击上部的"Create Graphs for this Host"为该设备创建需监测的内容。监测的内容分两种,"Graph Templates"和"Data Query",区别在于"Data Query"能根据SNMP信息列出监测项目的信息。例如Data Query里的"Interface Statistics"可以看到该主机所有网卡的信息,这样我们可以选择需要监测的网卡。点击右侧的正方形选择框勾选上要监测的项目



\rightarrow				
console grap	phs		V	
Console -> Create New G	iraphs		Logged in as a	dmin (Logout)
Create New Graphs Management Graph Management Graph Trees	Test host (192.168.100.110) Create new graphs for the following host: Test host (192.168.100.110) 🗸	*Edit this Host *Create New Host	Local Linux	Machine
Data Sources	Granh Templates			
Devices Collection Methods Data Queries Data Input Methods Templates Graph Templates Host Templates	Graph Template Name Create: Linux - Memory Usage Create: Unix - Load Average Create: Unix - Logged in Users Create: Unix - Processes			A A A
Data Templates Import/Export	Create: (Select a graph type to create)			
Import Templates	Data Querry [Univ_Cot Mounted Partitions]			0
Configuration Settings	Data Query (onx - Get Mounteu Parutons) Device Name		Mount Point	
Utilities	V dew mapper volgroup 00-Logvold0		· · · · · · · · · · · · · · · · · · ·	
System Utilities User Management Logout User	/dev/sda1		/boot	create

点击"Create"创建选择的监测内容,已经选择创建的内容会自动变成灰色并且不能再点选。 Cacti会自动创建该监测点的rrd文件(在rra文件夹中)、"Data Source"和"graph"条目。

console grap	hs		
Console -> Create New G	raphs -> Create Graphs from Data Query		Logged in as admin (Logout)
Create	Create Granh from 'Linux - Memory Usage'		
New Graphs	create draph nom Email Fremery obage		
Management	Create Graph from 'Unix - Load Average'		
Graph Management			
Graph Trees	Create Graph from 'Unix - Logged in Users'		
Data Sources	Graph Items [Template: Unix - Logged in Users]		
Devices	Legend Color	157419 -	
Collection Methods	The color to use for the legend.		
Data Queries	Create Craph from 'Unix - Drocossos'		
Data Input Methods	Create draph from Onix Processes		
Templates	Graph Items [Template: Unix - Processes]		
Graph Templates	The color to use for the legend.	F51D30 -	
Host Templates			
Data Templates	Create 1 Graph from 'Unix - Get Mounted Par	titions'	
Import/Export			
Import Templates			cancel create
Export Templates			

Console -> Create New	Graphs		Logged in as ad	lmin (Logout)
Create New Graphs	+ Created graph: Taut host - Komory Uwage + Created graph: Taut host - Load Average + Created graph: Test host - Logged in Users			
Management	+ Created graph: lest host - Processes + Created graph: Test host - Disk Space - /dev/mapper/Vol			
Graph Management	-			
Data Sources	Test host (192,168,100,110)		Local Linux	Machine
Devices		XE dit this Liest	200ar Einax	
Collection Methods	Create new graphs for the following host:	*Croate New Hest		
Data Queries	Test host (192.168.100.110)	"Create New Host		
Data Input Methods	-			
Templates	Graph Templates			
Graph Templates	Graph Template Name			
Host Templates	Create: Linux - Memory Usage			
Data Templates				
Import/Export	Create: Unix - Load Average			
Import Templates	_ Create: Unix - Logged in Users			
Export Templates				
Configuration	Cheate: Unix - Processes			
Settings	Create:			
Utilities	(besect a graph type to create)			
System Utilities	Data Overy [Unix - Get Mounted Partitions]			0
User Management	Device Name		Mount Point	
Logout User				
~	/ dev/mapper/volgroupu0-LogVol00		1	
	/dev/sda1		/boot	

创建监测点完毕。

4. 查看监测点

点击"Graph Management"可以看到刚才创建的监测点对应的图像,注意由于Cacti默认每5 分钟到监测服务器上取一次数据,所以刚创建的监测点会出现图像不能显示的现象,需要等几分钟查看才会正常显示。

console grap	hs		
Console -> Graph Manag	ement	Logged in a	as <mark>admin</mark> (Logout)
Create	Graph Management		Add
New Graphs	Filter by host: Localhost (127.0.0.1)	▼ Search: go c	lear
Management		, , , , , , , , , , , , , , , , , , ,	
Graph Management	<< Previous Sho	wing Rows 1 to 30 of 33 [1,2]	Next >>
CDEFs	Graph Title**	Template Name	Size 🗖
COIORS	Localhost - Advanced Ping	PING - Advanced Ping v1.3	120×500 🔲
raph Trees	Localhost - Advanced Ping	PING - Advanced Ping v1.3	120×500 🔲
ata Sources	Localhost - Advanced Ping	PING - Advanced Ping v1.3	120×500 🔲
evices	Localhost - Apache Statistics - Bytes / Request	WebServer - Apache Statistics - Bytes / Request	120×500 🔽
ollection Methods	Localhost - Apache Statistics - Hits / s	WebServer - Apache Statistics - Hits / s	120×500 🗖
ata Queries	Localhost - Apache Statistics - kBits / s	WebServer - Apache Statistics - kBits / s	120×500
ata Input Methods	Localhost - Apache Statistics - Thread Details	WebServer - Apache Statistics - Thread Details	120×500
mplates	Localbost - Anache Statistics - Thread Details (%)	WebServer - Anache Statistics - Thread Details (%)	120×500
aph Templates	Localhost - Apacha Statistics - Thread Scoreboard	WebServer - Apache Statistics - Thread Scoreboard	120×500
st Templates	Localhest - CDU Jicage	usd/path. CPU Usaga	120×500
ta Templates	Localhost - Disk Space - /dou/mannew/Vol	Unix - Ausilable Dick Space	120×500
port/Export	Localitiest - Disk Space - / dev/mapper/ voi		120×500
ort Templates	Localnost - Load Average	Unix - Load Average	120×500
figuration	Localhost - Load Average	ucd/net - Load Average	120×500
tings	Localhost - Logged in Users	Unix - Logged in Users	120×500
ities	Localhost - Memory Usage	Linux - Memory Usage	120×500
stem Utilities	Localhost - Memory Usage	ucd/net - Memory Usage	120×500
er Management	Localhost - Ping Latency	Unix - Ping Latency	120×500 🗌
jout User	Localhost - Processes	Unix - Processes	120×500 🗖
	Localhost - TCP Connection Statistics (5 minutes)	TCP MIB - Connection Statistics (conn/5min)	120×500

为了方便查看,可以将刚才新创建的设备或图像加入到"图像树"上:

点击 "Graph Tree" 进入 "图像树" 面板->

console gra	aphs	
Console -> Graph Tree	5	Logged in as admin (Logout)
Create	Graph Trees	Add
New Graphs	Name	
Management	Local Host	×
Graph Management		
Graph Trees		
Data Sources		
Devices		

点击分支名称或"Add"新的分支->

console gra	phs			
Console -> Graph Trees -> (Edit)		Logged in as admin		
Create	Graph Trees [new]			
New Graphs Management	Name A useful name for this graph tree.	Test host		
Graph Management	Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting)		
Graph Trees				
Data Sources		cancel crea		
Devices		Calleer		
Collection Methods				

点击"Add", 添加新的"Tree Items"->



Graph Trees [edit: Test host]	
Name A useful name for this graph tree.	Test host
Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting) 💌
Tree Items	Adı
++	
Item	Value
We Could Take There a	

"Tree Item Type" 中选择 "Host", "Tree Item Value" 的 "host" 中选择刚才新添加的主 机 "Test Host" ->

console grap	hs		
Console -> Graph Trees	-> (Edit) -> Graph Tree Items		Logged in as admin (Logout)
Create	Tree Items		
New Graphs Management	Parent Item Choose the parent for this header/graph.	[root]	
Graph Management	Tree Item Type Choose what type of tree item this is.	Host 💌	
Graph Trees	Tree Item Value		
Data Sources Devices	Host Choose a host here to add it to the tree.	Localhost (127.0.0.1)	•
Collection Methods	Graph Grouping Style		
Data Queries	Choose how graphs are grouped when drawn for this particular	Graph lemplate 💌	
Data Input Methods			
Template <i>s</i>			cancel create
Graph Templates			cancer create

点击"Create"。

Save Successful.	
Graph Trees [edit: Test host]	
Name A useful name for this graph tree.	Test host
Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting) 💌

Tree Items			Add
++			
Item	Value		
Host: Localhost (127.0.0.1)	Host	**	×
		cancel	save

直接在ViewTree中添加一个host节点进行监控无疑是一个简单的方法,但随监控图的增多, 将所有的图像放到一个host节点上,当查看图像时图像的显示速度会变慢,而且监控图的条 理也不清除,所以通常可以根据监控图监控的功能和监控服务的类型等进行分类,整理出一 棵有条理的图像树。可以按下面步骤添加节点。

首先添加一个root节点,"Tree Item Type"中选择"Header","Title"中填写一个合适的 描述性信息,如本例填写"Host Monitor",Host Monitor节点的图像主要是和主机性能相关 的一些图像,如CPU、内存、磁盘空间等;



console gra	phs	
Console -> Graph Trees	-> (Edit) -> Graph Tree Items	Logged in as admin (Logout)
Create	Tree Items	
New Graphs	Parent Item	[root] -
Management	Choose the parent for this header/graph.	[1000]
Graph Management	Tree Item Type	Header 💌
Graph Trees	choose what type of thee item this is.	
Data Sources	Tree Item Value	
Devices	Title If this item is a header, enter a title here.	Host Monitor
Collection Methods	Sorting Type	Menuel Ordering (No Sorting)
Data Queries	Choose how children of this branch will be sorted.	mandai ordering (No Sorting)
Data Input Methods		
Templates		cancel create
Graph Templates		
1		

点击刚创建的root节点(Host Monitor)后面的Add链接来添加一个Graph;

Save Successful.

Graph Trees (eult: Test host)			
Name A useful name for this graph tree.	Test host		
Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting) 💌		
Tree Items			Add
++			
Item	Value		
Host: Localhost (127.0.0.1)	Host	**	×
🗆 Host Monitor (Add)	Heading	**	×
		ancel	save

在 "Tree Item Type" 中选择 "Graph", 在 "graph"中选择加入想要加入的监控图, 重复此 过程加入所有你想加入的监控图。

Tree Items		
Parent Item Choose the parent for this header/graph.	Host Monitor 💌	
Tree Item Type Choose what type of tree item this is.	Graph 💌	
Tree Item Value		
Graph Choose a graph from this list to add it to the tree.	Localhost - CPU Usage	V
Round Robin Archive Choose a round robin archive to control how this graph is displayed.	Daily (5 Minute Average)	3
		cancel create

Save Successful.	
Graph Trees [edit: Test host]	
Name A useful name for this graph tree.	Test host
Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting) 💌
Tree Items	bhα
++	

Item	Value		
Host: Localhost (127.0.0.1)	Host	**	×
🗆 Host Monitor (Add)	Heading	**	×
Localhost - CPU Usage	Graph	**	×
		cancel	save

你还可以添加Tree Items,如MySQL Monitor,此节点用来监控与MySQL服务相关的信息,重 复上面的过程直到一颗有条例的树创建完成。

Tree Items			Add
++			
Item	Value		
Host Monitor (Add)	Heading	**	×
🗆 MySQL Monitor (Add)	Heading	**	×
Localhost - teMySQL - Load Average	Graph	**	×
Localhost - teMySQL - CPU Usage	Graph	**	×
Localhost - teMySQL - Network Usage	Graph	**	×
Localhost - teMySQL - Index Usage	Graph	**	×
Localhost - teMySQL - Select Queries	Graph	**	×
Localhost - teMySQL - Select Handler	Graph	**	×
Localhost - teMySQL - Query Cache	Graph	**	×
Localhost - teMySQL - Locking and Slow	Graph	**	×
Localhost - teMySQL - Old Command Stats	Graph	**	×
Localhost - teMySQL - Sorts	Graph	**	×
Localhost - teMySQL - Threads/Abends	Graph	**	×
Localhost - teMySQL - Volatile Queries	Graph	**	×
🗄 Advance Ping (Add)	Heading	**	×
Monitor TCP 80(Apache) (Add)	Heading	**	×
Localhost - Advanced Ping	Graph	**	×
Monitor TCP 3306(MySQL) (Add)	Heading	**	×
Localhost - Advanced Ping	Graph	**	×
Monitor TCP 22(SSH) (Add)	Heading	**	×
Localhost - Advanced Ping	Graph	**	×
🗄 Apache Monitor (Add)	Heading	**	×
Localhost - Apache Statistics - Hits / s	Graph	**	×
Localhost - Apache Statistics - Bytes / Request	Graph	* 🛧	×
Localhost - Apache Statistics - kBits / s	Graph	**	×
Localhost - Apache Statistics - Thread Details	Graph	**	×
Localhost - Apache Statistics - Thread Details (%)	Graph	**	×

这样,我们就可以在"graphs"界面中查看"Test Host"的所有监测图像了。



5. 为已有 host 添加新的监控图

在 console 控制台下点击"New Graphs",选择要添加监控图的主机。在 Graph Templates 中选择一个 Graph 模板,本例选择 SNMP - Ceneric OID Template,点击 create 按钮。



console grag	phs			
Console -> Create New (Graphs		Logged in as	admin (Logout)
Create New Graphs Management Graph Management Graph Trees	Test host (192.168.100.110) Create new graphs for the following host: Test host (192.168.100.110)	*Edit this Host *Create New Host	Local Linux	(Machine
Data Sources	Graph Templates			
Devices Collection Methods	Graph Template Name			
Data Queries	Create: Linux - Memory Usage			
Data Input Methods	Create: Unix - Load Average			
Templates	Cenatra Unix - Loggod in Licord			
Graph Templates	- Cogged in Osers			
Host Templates	Create: Unix - Processes			
Data Templates	Create:			
Import/Export	SUME - Generic OID Template			
Import Templates				
Export Templates	Data Query [Unix - Get Mounted Partitions]			•
Configuration	Device Name		Mount Point	
Settings	/dev/mapper/VolGroup00-LogVol00		/	
Utilitie <i>s</i>				
System Utilities	/dev/sda1		/boot	
User Management				
Logout User	-		cancel	create

填写以下信息,在"Title"文本框中填写 Graph 的名字,在"Vertical Lable"文本框中填 写描述信息或是所绘图片使用的单位等,显示在所绘图片的左侧,在"name"文本框中填写 此数据源的名字,在"LegendColor"中选择画图使用的颜色,在"Legend Text"填写图例 的名字,在"OID"文本框中填写要监控的主机的OID 信息,点击"create"按钮完成 Graph 的创建。

Create Graph from 'SNMP - Generic OID Template'	
Graph [Template: SNMP - Generic OID Template]	
Title The name that is printed on the graph.	host_description - Tcp Established
Vertical Label The label vertically printed to the left of the graph.	Established
Graph Items [Template: SNMP - Generic OID Template]	
Legend Color The color to use for the legend.	00FF00 -
Legend Text Text that will be displayed on the legend for this graph item.	Established
Data Source [Template: SNMP - Generic OID Template]	
Name Choose a name for this data source.	host_description - Tcp Established
Maximum Value [snmp_oid] The maximum value of data that is allowed to be collected.	100
Data Source Type [snmp_oid] How data is represented in the RRA.	GAUGE
Custom Data [Template: SNMP - Generic OID Template]	
OID	. 1. 3. 6. 1. 2. 1. 6. 9. 0
	cancel create

完成后监控图如下:





6. 合并多个数据源到一张图上

在 console 控制台下点击 "Graph Management", 然后点击 Add 链接。

console grap	hs		
Console -> Graph Manag	gement	Logged in as	admin (Logout)
Create	Graph Management		Add
New Graphs Management	Filter by host: Localhost (127.0.0.1) 🔽	Search: go clear	
Graph Management	<< Previous Sho	owing Rows 1 to 30 of 33 [1,2]	Next >>
Colors GPRINT Presets	Graph Title** Localhost - Advanced Ping	Template Name PING - Advanced Ping v1.3	Size 120×500
Graph Trees	Localhost - Advanced Ping	PING - Advanced Ping v1.3	120×500 🗖
Data Sources Devices	Localhost - Advanced Ping Localhost - Apache Statistics - Bytes / Request	PING - Advanced Ping v1.3 WebServer - Apache Statistics - Bytes / Request	120×500 🗌 120×500 🔲
Collection Methods Data Queries	Localhost - Apache Statistics - Hits / s	WebServer - Apache Statistics - Hits / s	120×500
Data Input Methods	Localhost - Apache Statistics - KBits / s Localhost - Apache Statistics - Thread Details	WebServer - Apache Statistics - KBits / s WebServer - Apache Statistics - Thread Details	120×500
Graph Templates	Localhost - Apache Statistics - Thread Details (%) Localhost - Apache Statistics - Thread Scoreboard	WebServer - Apache Statistics - Thread Details (%) WebServer - Apache Statistics - Thread Scoreboard	120×500 □ 120×500 □
Host Templates Data Templates	Localhost - CPU Usage	ucd/net - CPU Usage	120×500
Import/Export Import Templates	Localhost - Disk Space - /dev/mapper/Vol Localhost - Load Average	Unix - Available Disk Space Unix - Load Average	120×500 🗌 120×500 🔲
Export Templates	Localhost - Load Average	ucd/net - Load Average	120×500 🗖

在 "Select Graph Template" 下拉框中选择 None, 在 "Host" 下拉框中选择 None, 然后点 击 create 按钮。

Graph Template Selection [new]		
Selected Graph Template Choose a graph template to apply to this graph. Please note that graph data may be lost if you change the graph template after one is already applied.	None	•
Host Choose the host that this graph belongs to.	None	
		cancel create

在"Title"文本框中输入Graph的名字。



Graph Template Sel	ection [new]	
Selected Graph Templa	te	
Choose a graph templa	ate to apply to this graph. Please	Jone 🔻
note that graph data m	ay be lost if you change the graph \mathbb{L}	
template after one is a	iready applied.	
Host		None 🔻
choose the host that t	ns graph belongs to.	
Graph Configuration		
- d	•	
The name that is printe	d on the graph.	TCP TEST
Image Format		
The type of graph that	is generated; GIF or PNG,	PNG 💌
Height	· ·	kee
The height (in pixels) t	hat the graph is.	120
Width		500
The width (in pixels) th	at the graph is.	500
Auto Scale		
Auto scale the y-axis in	stead of defining an upper and lower	. 🔽 Auto Saala
limit. Note: if this is che	eck both the Upper and Lower limit wi	Auto Scale
be ignored.		
Auto Scale Options		O Usealt-autoscale
alt-autoscale to scale to	n the absolute minimum value, or	
maximum.		🖲 Usealt-autoscale-max
Logarithmic Auto Scalir	ng (logarithmic)	-
Use Logarithmic y-axis	scaling	Logarithmic Auto Scaling (logarithmic)
Rigid Boundaries Mode	(rigid)	
Do not expand the lowe	er and upper limit if the graph contair	s 🔲 Rigid Boundaries Mode (rigid)
a value outside the vali	id range.	
Auto Padding		
Pad text so that legend	1 and graph data always line up. Note . to take longer to render because of	
the larger overhead. Al	so Auto Padding may not be accurate	M Auto Padding
on all types of graphs,	consistant labeling usually helps.	
Allow Graph Export		
Choose whether this gr	aph will be included in the static	🗹 Allow Graph Export
html/nna export it vou	use carti's export teature.	
点击 Add 链接,添	:加Graph Items。	
console graph		
Console -> Graph Manage	ment -> (Edit)	Logged in as admin (Logout)
Create	Save Successful.	
New Graphs		
Management	Test Graph	*Turn On Graph Debug Mode
Graph Management	reacoraph	rum on oraph bebug Mode.
CDEEs	Court Townlets Colorities India	
Colors	Graph Template Selection [edit:	rest Graphij
colors	Selected Graph Template	
GPRINT Presets	this graph. Please note that graph da	a None 🔻
Graph Trees	may be lost if you change the graph	,
Data Sources	template atter one is already applied.	
Devices	Host	None
Collection Methods	belongs to,	Inone
Data Queries		
Data Input Methods	Graph Items [edit: Test Graph]	bbA
Templates	Cupph Itops Data Source	

×

添加多个数据源,将所选的多个数据源画到一张监控图上。

No Items

Graph Templates

Host Templates Data Templates

Import/Export



Graph Items [edit graph: TCP	TEST]
Data Source The data source to use for this graph item.	Localhost - TCP MIB - Passive Open Connections (tcp_passiveopen)
Color The color to use for the legend.	FF00FF -
Graph Item Type How data for this item is represented visually on the graph.	LINE1
Consolidation Function How data for this item is represented statistically on the graph.	LAST
CDEF Function A CDEF (math) function to apply to this item on the graph.	None
Value The value of an HRULE or VRULE graph item.	
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal
Text Format Text that will be displayed on the legend for this graph item.	PassiveOpen
Insert Hard Return Forces the legend to the next line after this item.	Insert Hard Return
Sequence	
	cancel create

Graph Items [edit graph: TCP	TEST]
Data Source The data source to use for this graph item.	Localhost - TCP MIB - Active Open Connections (tcp_activeopen)
Color The color to use for the legend.	0000FF -
Graph Item Type How data for this item is represented visually on the graph.	LINE1
Consolidation Function How data for this item is represented statistically on the graph.	LAST
CDEF Function A CDEF (math) function to apply to this item on the graph.	None
Value The value of an HRULE or VRULE graph item.	
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal
Text Format Text that will be displayed on the legend for this graph item.	ActiveOpens
Insert Hard Return Forces the legend to the next line after this item.	☑ Insert Hard Return
Sequence	
	cancel create

石头记出品





完成后将所画的监控图放到Graph Trees 中。

如何将数据源的当前值、平均值、最大值画到图例中?请见下面**打造自己的 cacti**模板小节中的新建作图模板。

六、Cacti 脚本及模板

Cacti 脚本及模板论坛: http://forums.cacti.net/forum-12.html 一个完整的 cacti 脚本及模板列表: http://forums.cacti.net/about15067.html

1. Advance Ping 脚本及模板

下载地址: http://forums.cacti.net/about10049.html

注:要使用此模板,编译 PHP 时必须加上--enable-sockets 选项来支持套接字。

1). 功能: 此模板用来监控一个 TCP/UDP 端口、ICMP 的延时情况和丢包情况。

2). 下载 ss_fping.php 脚本并放到/usr/local/apache/htdocs/cacti/scripts/目录

下,下载 cacti_graph_template_ping_advanced_ping_v1_3.xml 模板,用 cacti 的模板导入页将此模板导入。

石头记出品

	lates			rogg	ed in as adi	min (Logout)
reate	Import Templates					
ew Graphs	Import Template from Lo	ocal File				
lanagement	If the XML file containing	template data is	located on your local	20126	_	
iraph Management	inactione, serect it there.	选择文件		? 🗙		
raph Trees					1	
ata Sources		查找范围(<u>(</u>):	🗁 scripts 🔹 🗧 🗲	💣 🎟 •		
evices			anti much tembris sins administration of the			
hresholds	Import Template from T		cacti_graph_tempiate_ping_advanced_ping_v1_5.xmi			
eathermaps	it into this box to import	我最近的文档	cacti_graph_temprate_pring_advanced_pring_v1_5. 21p			
ollection Methods	-		ss_tping. 21p			
ata Queries						
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ystem Utilities			文件名(图): cacti_graph_template_ping_advanced_pi	.▼ 打开 @)		
ser Management			☆健業利(P)・ 「応方☆健(c_+)	- In sec		

3).在 Console 选项卡下的左侧菜单栏中选择 Devices,为要监控的主机新建一个

Devices 或选择已有 Devices。在 Associated Graph Templates 中添加 Advanced

Pingv1.3 模板。并点击最上面的 Create Graphs for this Host 链接,在

4	Associated Graph Templates		
•	Sraph Template Name	Status	
:	L) Linux - Memory Usage	Is Being Graphed (Edit)	×
:	2) PING - Advanced Ping v1.3	Is Being Graphed (Edit)	×

Graph Templates 的选择框中选择 **PING - Advanced Ping v1.3,**然后点击 **Create** 按 钮,出现以下 **WEB** 页。

Create Graph from 'PING - Advanced Ping v1.3'		
Custom Data [Template: PING - Advanced Ping v1.3]		
The number of times to ping the host	20	
Ping protocol to use. Either ICMP (default), TCP, or UDP	TCP	
Port to ping. Applies only to TCP and UDP protocols.	80	

第一项意思是一次向要监控的端口发送多少个探测包(默认 20 个),第二项是使用的 协议,可以是 ICMP、TCP、UDP,第三项是要监控的端口号(只有第二项为 TCP 或 是 UDP 时使用),填写完成后点击 create 按钮。

在 Console 控制台选项卡下的左侧菜单中选择 Date Sources,选择以上新建的数据 源可以修改以上填写的信息。



console graphs threshid monitor weathermap					
Console -> Data Sources	onsole -> Data Sources -> (Edit) Logged in as admin (Loggu				
Create New Graphs	Localhost - Advanced Ping		*Turn On Dat	a Source Debug Mode.	
Management	Data Template Selection [edit: Local	host - Advanced Ping]			
Graph Management Graph Trees	Selected Data Template The name given to this data template.	PING - Advanced Ping	v1.3	~	
Data Sources RRAs	Host Choose the host that this graph belongs to.	Localhost (127.0.0.1)			
Devices					
Thresholds	Supplemental Data Template Data				
Weathermaps	Data Source Fields				
Collection Methods Data Queries	Data Source Path The full path to the RRD file.		<pre><path_rra>/localhost_loss_82.r</path_rra></pre>	rd	
Data Input Methods	Custom Data				
Templates	The number of times to ping the host		20		
Graph Templates			man		
Host Templates	Ping protocol to use. Either ICMP (default), TCP, or UDP	ICP		
Data Templates	Port to ping. Applies only to TCP and UDP	protocols.	11		
Threshold Templates		-			
Import/Export					
Import Templates				cancel save	

在控制台选项卡下左侧菜单中选择 Graph Trees 可以组织一个树状视图。



在 graphs 选项卡下浏览创建的 Advanced Ping 监控图。





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TCP80 端口 (HTTP)

Pkt Loss:丢包数量/20 * 100%(每次 ping 20 个包) Avg Loss:平均丢包情况 Latency: 延时情况 Avg Latency: 平均延时情况

2. MySQL stats 模板

```
论坛讨论: http://forums.cacti.net/about11010.html
下载地址: http://www.faemalia.net/mysglUtils/
功能:用来监控 MySQL 状态,其中包括索引使用情况、查询、排序、锁定情况等。
1). 将 mysql stats.php 和 dumpMemcachedStats.php 脚本放到 cacti 脚本目
录下 ( /usr/local/apache/htdocs/cacti/scripts/ ) , 导入模板时注意选择
cacti_host_template_temysql_host-step300-heartbeat600.xml
                                                         和
cacti_host_template_memcached_host-step300-heartbeat600.xml 模板
2). 配置 MySQL 服务器, 让 cacti 所在机器能够访问 MySQL 服务器的状态信息, 必
须拥有"process"权限。如果要监控InnoDB状态,还必须有"SUPER"权限。
GRANT PROCESS ON * TO cacti@'cactimachine' IDENTIFIED by 'cacti';
GRANT SUPER ON * TO cacti@'cactimachine' IDENTIFIED BY 'cacti';
3).创建 Graph。在 Console 选项卡下的左侧菜单栏中选择 Devices,为要监控的主
机新建一个 Devices 或选择已有 Devices。在 Associated Graph Templates 中添加
想要监控 MySQL 状态的 Graph Templates(如 teMySQL – Index Usage 模板,此套
模板是以 teMySQL 开头的一系列模板)。并点击最上面的 Create Graphs for
this Host 链接,在 Graph Templates 的选择框中选择 teMySQL – Index Usage,
然后点击 Create 按钮,出现以下 WEB 页。
```

Create Graph from 'teMySQL - Index Usage'	
Custom Data [Template: teMySQL - Index Usage]	
User name	
Password	
	cancel create

在上面填写有权限访问 MySQL 数据库的用户名及密码, 然后点击 create 按钮。



选中刚添加的 Graph Templates,点击 create 按钮来创建 Graph。 在控制台选项卡下左侧菜单中选择 Graph Trees 可以组织一个树状视图。

console graphs thr
Graphs -> Tree Mode
Linux Host
Host Monitor
MySQL Monitor
- Advance Ping
···· Monitor TCP 80(Apache)
Monitor TCP 3306(MySQL)
Monitor TCP 22(SSH)
Host Monitor
MySQL Monitor
Advance Ping
Host: Win2k3

在 graphs 选项卡下浏览创建的 MySQL 监控图。





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缩略图:



3.打造自己的 cacti 模板(Data Template、Graph Template、Host Template)

(1).新建数据模板(Data Template)

在 console 选项卡下左侧菜单栏中点击 Data Templates 连接,打开新建数据模板窗口。

Templates Graph Templates Host Templates Data Templates

在新建数据模板窗口点击 Add 按钮添加"Data Templates"。

Data Templates	bbA
Search:	go clear

填写以下内容:

1).Name 第一个Name是模板的名称,可自定义设置,再此填写"Windows - CPU Usage";

2).Name 第二个Name是数据源的名字,再此填写"Windows - CPU Usage";

3).Data Input Method 获取数据的方法,选择"Get SNMP Data";

4).Internal Data Source Name 数据源值的名称"WindowsCPU";

5).Minimum和Maximum这两个值如果不填写表示使用数据源的最大和最小值作为图形的上、下限值;

6).Data Source Type 选择"COUNTER";

7).输入OID值,这一步是定义数据源最关键的一个环节,要确认OID真实存在。点击 "save"保存数据源。

Data Templates [edit: Windows - CPU Usage]	
Name The name given to this data template.	Windows - CPU Usage
Data Source	
Name Use Per-Data Source Value (Ignore this Value)	Windows - CPU Usage
Data Input Method This field is always templated.	Get SNMP Data
Associated RRA's This field is always templated.	Daily (5 Minute Average) Weekly (30 Minute Average) Monthly (2 Hour Average) Yearly (1 Day Average)
Step Use Per-Data Source Value (Ignore this Value)	300
Data Source Active Use Per-Data Source Value (Ignore this Value)	☑ Data Source Active
Data Source Item [WindowsCPU]	New
Internal Data Source Name Use Per-Data Source Value (Ignore this Value)	WindowsCPU
Minimum Value Use Per-Data Source Value (Ignore this Value)	0
Maximum Value Use Per-Data Source Value (Ignore this Value)	0
Data Source Type Use Per-Data Source Value (Ignore this Value)	GAUGE
Heartbeat	600



SNMP IP Address	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.
SNMP Community	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.
SNMP Usemame	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.
SNMP Password	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.
SNMP Version (1, 2, or 3)	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.
010	. 1. 3. 6. 1. 2. 1. 25. 3. 3. 1. 2. 1
Use Per-Data Source Value (Ignore this Value)	
SNMP Port	
Use Per-Data Source Value (Ignore this Value)	Value will be derived from the host if this field is left empty.



Windows-Cou 1	Get SNMP Data	Active	
Windows-Cpu2	Get SNMP Data	Active	
Windows-Cpu3	Get SNMP Data	Active	
Windows-Cpu4	Get SNMP Data	Active	
<< Previous	Showing Rows 31 to 52 of 52 [1, 2]	Nex	t >>
<u>ц</u>	Choose an actio	. Delete 🔻	go

(2).新建作图模板(Graph Template)

在 console 选项卡下左侧菜单栏中点击 Graph Templates 连接,打开新建作图模板窗口。

Templates
Graph Templates
Host Templates
Data Templates

在新建作图模板窗口点击 Add 按钮添加"Graph Templates"。

Graph Te	mplates		Ado
Search:		go	clear

填写以下内容:

1).Name 第一个 Name 是模板的名称,可自定义设置,再此填写"Windows - CPU Usage";

2).Title 画出的图片的标题,其中"**|host_description|**"相当于一个变量,在作图时自动 替换成主机描述。

3).Vertical Lab 显示在所画图片的左侧,通常为作图所用的单位或描述。

点击"create"按钮创建作图模板。



Template [new]	
Name The name given to this graph template.	Windows - CPU Usage
Graph Template	
Title □ Use Per-Graph Value (Ignore this Value)	host_description - CPU Usage
Image Format Image Format Use Per-Graph Value (Ignore this Value)	PNG -
Height	120
width Use Per-Graph Value (Ignore this Value)	500
Auto Scale Graph Value (Ignore this Value)	✓ Auto Scale
Auto Scale Options Use Per-Graph Value (Ignore this Value)	 ○ Usealt-autoscale ⊙ Usealt-autoscale-max
Logarithmic Auto Scaling (logarithmic) Use Per-Graph Value (Ignore this Value)	Logarithmic Auto Scaling (logarithmic)
Rigid Boundaries Mode (rigid) Use Per-Graph Value (Ignore this Value)	Rigid Boundaries Mode (rigid)
Auto Padding Use Per-Graph Value (Ignore this Value)	✓ Auto Padding
Allow Graph Export Use Per-Graph Value (Ignore this Value)	✓ Allow Graph Export
Upper Limit Use Per-Graph Value (Ignore this Value)	100
Lower Limit Use Per-Graph Value (Ignore this Value)	0
Lower Limit Use Per-Graph Value (Ignore this Value)	0
Base Value Buse Value Use Per-Graph Value (Ignore this Value)	1000
Unit Grid Value Use Per-Graph Value (Ignore this Value)	
Unit Exponent Value Use Per-Graph Value (Ignore this Value)	
Vertical Label ☐ Use Per-Graph Value (Ignore this Value)	Percent
	cancel create

下面就需要用前面定义的数据源创建我们需要显示的图形了。一个数据源通常需要定义四 个数据值,分别是"区域图"、"当前值"、"平均值"和"最大值",这些值分别显示了系统不同

时段的状态。点击 Add 添加"Graph template Items"。

Graph Template Items [edit: Windows - CPU Usage]				Add	
Graph Item	Data Source	Graph Item Type	CF Type	Item Color	
No Items					
Graph Item Inputs					Add
Name					
No Inputs					
Template [edit: Window:	s - CPU Usage]				
Name The name given to this grap	oh template.	Windows - CPU Us	age		

填写以下内容:

1).Data Source 选择定义的数据源模板;

2).Color 只有"Graph Item Type"图形类型选择的是AREA, STACK, LINE1, LINE2, LINE3其中之一,才能够为数据源选择颜色;

3).Graph Item Type 定义图形的项类型,因为是首个图形项,所以要选择"AREA";

4).Text Format 定义一个显示名称;

其它的数值保持默认,点击"create"。

Graph Template Items [edit graph: Windows - CPU Usage]			
Data Source The data source to use for this graph item.	Windows - CPU Usage - (WindowsCPU)		•
Color The color to use for the legend.	2175D9		
Graph Item Type How data for this item is represented visually on the graph.	LINE1		
Consolidation Function How data for this item is represented statistically on the graph.	LAST		
CDEF Function A CDEF (math) function to apply to this item on the graph.	None	•	
Value The value of an HRULE or VRULE graph item.			
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal		
Text Format Text that will be displayed on the legend for this graph item.	CPU Usage		
Insert Hard Return Forces the legend to the next line after this item.	🔲 Insert Hard Return		
Sequence			
		cancel c	reate

点击 Add 继续添加"Graph template Items"。

Graph Template	e Items [edit: Windows - CPU Usa	ge]				Add
Graph Item	Data Source	Graph Item Type	CF Type	Item Color		
Item # 1	(WindowsCPU): CPU Usage	LINE1	LAST	2175D9	**	×
Graph Item Inp	uts					Add
Name						
Data Source [Win	dowsCPU]					×
Template [edit:	Windows - CPU Usage]					
Name The name given t	o this graph template.	Windows - CPU Usage	9			

添加当前运行值,填写以下内容:

1).Data Source 选择"Windows - CPU Usage - (WindowsCPU)"

2).Graph Item Type 选择"GPRINT"图形项类型,只有这个类型才能定义当前、平均和 最大值。

3).Consolidation Function 选择"LAST",表示当前运行的值

4).Text Format 定义图表中显示的名称

Graph Template Items [edit graph: Windows - CPU Usage]			
Data Source The data source to use for this graph item.	Windows - CPU Usage - (WindowsCPU)		•
Color The color to use for the legend.	None 💌		
Graph Item Type How data for this item is represented visually on the graph.	GPRINT -		
Consolidation Function How data for this item is represented statistically on the graph.	LAST		
CDEF Function A CDEF (math) function to apply to this item on the graph.	None	•	
Value The value of an HRULE or VRULE graph item.			
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal		
Text Format Text that will be displayed on the legend for this graph item.	Current:		
Insert Hard Return Forces the legend to the next line after this item.	Insert Hard Return		
Sequence			
		cancel	create



添加平均值,只需修改"Consolidation Function"和"Text Format"的内容即可。

Graph Template Items [edit graph: Windows - CPU Usage]		
Data Source The data source to use for this graph item.	Windows - CPU Usage - (WindowsCPU)	•
Color The color to use for the legend.	None	
Graph Item Type How data for this item is represented visually on the graph.	GPRINT 💌	
Consolidation Function How data for this item is represented statistically on the graph.	AVERAGE 💌	
CDEF Function A CDEF (math) function to apply to this item on the graph.	None	•
Value The value of an HRULE or VRULE graph item.		
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal	
Text Format Text that will be displayed on the legend for this graph item.	Average:]
Insert Hard Return Forces the legend to the next line after this item.	🗖 Insert Hard Return	
Sequence		
		cancel create

添加最大值,也是修改"Consolidation Function"和"Text Format"的内容,勾选"Insert Hard Return"前面的复选框,表示插入一个硬回车,这是为了和其它新创建的图例不要重 叠显示在一行上。

Graph Template Items [edit graph: Windows - CPU Usage]			
Data Source The data source to use for this graph item.	Windows - CPU Usage - (WindowsCPU)		•
Color The color to use for the legend.	None		
Graph Item Type How data for this item is represented visually on the graph.	GPRINT 💌		
Consolidation Function How data for this item is represented statistically on the graph.	MAX		
CDEF Function A CDEF (math) function to apply to this item on the graph.	None	•	
Value The value of an HRULE or VRULE graph item.	[
GPRINT Type If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal		
Text Format Text that will be displayed on the legend for this graph item.	Maximum:		
Insert Hard Return Forces the legend to the next line after this item.	🔽 Insert Hard Return		
Sequence			
		anneal	avente
		cancel	create

Graph Templa	ate Items [edit: Windows - CPU Usage]					Add
Graph Item	Data Source	Graph Item Type	CF Type	Item Color		
Item # 1	(WindowsCPU): CPU Usage	LINE1	LAST	2175D9	- 🕈 🛧	×
Item # 2	(WindowsCPU): Current:	GPRINT	LAST		**	×
Item # 3	(WindowsCPU): Average:	GPRINT	AVERAGE		++	×
Item # 4	(WindowsCPU): Maximum: <hr/>	GPRINT	MAX		++	×
Graph Item I	nputs					Add
Name						
Data Source [W	'indowsCPU]					×
Template [ed	it: Windows - CPU Usage]					
Name The name giver	n to this graph template.	Windows - CPU Usa	ge			

如果要添加其他数据源可按上面的方法依次添加,这样可以将多个数据源的数据画到一张图上。

下面是一个四 CPU 作图模板的截图:

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Draw / Line Other Server Description Control Draw / Line (Winderscpui): Correct: OPENITY LAFT PEEDIFY X Draw / Line (Winderscpui): Correct: OPENITY AVERATION X Draw / Line (Winderscpui): Correct: OPENITY AVERATION X Draw / Line (Winderscpui): Average: OPENITY AVERATION X Draw / Line (Winderscpui): Correct: OPENITY AVERATION X <	Graph Template	Items [edit: Windows - 4CPU Usage]				Add
Item # 1 (Windexcput): COURT OPENIT LAST PODEF A Item # 2 (Windexcput): Aurage: Windexcput): Aurage: Windexcput): Aurage: Windexcput): Current: Windexcput): Current: Windexcput): Current: Windexcput): Current: Windexcput): Current: Windexcput): Current: Windexcput): Aurage: Windexcput): Current: Windexcput): Aurage: Windexcput): Current: Windexcput): Aurage: Windexcput): Aurage: Windexcput]: Windexcput]: Windexcput]: Mox Windexcput]: Windexcput]: Windexcput]: Mox Windex	Graph Item	Data Source	Graph Item Type	CF Type	Item Color	
tem # 2 (Windevcput): Current: GPRINT LAST tem # 4 (Windevcput): Maximum: GND GPRINT ARAR tem # 4 (Windevcput): Maximum: GND GPRINT ARAR tem # 4 (Windevcput): Maximum: GND GPRINT ARAR tem # 1 (Windevcput): GPUE Usage LINE I LAST FORMAR tem # 1 (Windevcput): Maximum: GND GPRINT ARAR ARAR tem # 1 (Windevcput): Maximum: GND GPRINT ARRAGE ARAR tem # 14 (Windevcput): Maximum: GND GPRINT ARRAGE ARRAGE tem # 14 (Windevcput): Maximum: GND GPRINT ARRAGE ARRAGE tem # 14 (Windevcput): Maximum: GND GPRINT ARRAGE ARRAGE tem # 15 (Windevcput): Maximum: GND GPRINT ARRAGE ARRAGE tem # 15 (Windevcput): Maximum: GND GPRINT ARRAGE ARRAGE tem # 15 (Windevcput): ARRAGE ARRAGE ARRAGE ARRAGE tem # 15 (Windevcput): Current: GPRINT ARRAGE ARRAGE tem # 16 (Win	Item # 1	(WindowsCpu1): CPU1 Usage	LINE1	LAST	0000FF	🕈 🛧 🗙
Item # 1 (WindowsCpu2): Average: GPRINT AVERAGE Item # 3 (WindowsCpu2): Cereat: GPRINT AVERAGE Item # 4 (WindowsCpu2): Cereat: GPRINT AVERAGE Item # 5 (WindowsCpu2): Average: GPRINT AVERAGE Item # 10 (WindowsCpu2): Average: GPRINT AVERAGE Item # 10 (WindowsCpu2): Average: GPRINT AVERAGE Item # 10 (WindowsCpu2): Correct: GPRINT AVERAGE Item # 10 (WindowsCpu2): Average: GPRINT AVERAGE Item # 11 (WindowsCpu2): Average: GPRINT AVERAGE Item # 12 (WindowsCpu2): Average: GPRINT AVERAGE Item # 14 (WindowsCpu2): GPU3 Etage Itel # Itel # Item # 15 (WindowsCpu2): GPU3 Etage Itel # Itel # Item # 14 (WindowsCpu2): GPU3 Etage Itel # Itel # Item # 15 (WindowsCpu3): GPU3 Etage Itel # Itel # Item # 14 (WindowsCpu3): GPU3 Etage Itel # Itel # Item # 15 (WindowsCpu3): GPU3 Etage Itel # Itel # Item # 16 (WindowsCpu3): GPU3 Etage Itel # Itel # Graph Item Inputs Moetage Itel	Item # 2	(WindowsCpu1): Current:	GPRINT	LAST	_	🕈 🛧 🛛 🗙
Hem # 4 (WindowsCput) Maximum (SHE) GPRINT MAX *** Hom # 5 (WindowsCput) Current: GPRINT LAST 21759 Hom # 5 (WindowsCput) Average: GPRINT LAST 21759 Hom # 6 (WindowsCput) Average: GPRINT LAST 21759 Hom # 1 (WindowsCput) Average: GPRINT LAST UDDER Hom # 10 (WindowsCput) Current: GPRINT LAST UDDER Hom # 10 (WindowsCput) Average: GPRINT LAST UDDER X Hom # 12 (WindowsCput) Average: GPRINT LAST Esses X Hom # 12 (WindowsCput) Average: GPRINT LAST Esses X Hom # 13 (WindowsCput) Average: GPRINT LAST Esses X Toms # 13 (WindowsCput) Average: GPRINT MAX X X Toms # 14 (WindowsCput) Average: GPRINT MAX X X Toms # 14 (WindowsCput) Average: GPRIN	Item # 3	(WindowsCpu1): Average:	GPRINT	AVERAGE		🔫 🛧 🛛 🗙
Item # 5 (WndowsCpu2) courant: GPRINT LAST 27509 X Item # 5 (WndowsCpu2) courant: GPRINT AVERAGE X Item # 7 (WndowsCpu2) Average: GPRINT AVERAGE X Item # 0 (WndowsCpu2) Average: GPRINT MAST BD00BA X Item # 10 (WndowsCpu2) Current: GPRINT LAST BD00BA X Item # 11 (WndowsCpu2) Current: GPRINT LAST BD00BA X Item # 11 (WndowsCpu2) Current: GPRINT LAST EES019 X Item # 11 (WndowsCpu2) Current: GPRINT LAST EES019 X Item # 13 (WndowsCpu2) Current: GPRINT LAST EES019 X Item # 13 (WndowsCpu2) Current: GPRINT AVERAGE X X Data Source (WndowsCpu2) Current: GPRINT AVERAGE X X Data Source (WndowsCpu2) Exection (WndowsCpu2) X X X X Data Source (WndowsCpu2) Exection (WndowsCpu2) X X X </td <td>Item # 4</td> <td>(WindowsCpu1): Maximum:<HR></td> <td>GPRINT</td> <td>MAX</td> <td>_</td> <td>** ×</td>	Item # 4	(WindowsCpu1): Maximum:< HR>	GPRINT	MAX	_	** ×
Hem # 6 (WndowsCpu2): Average: GPRINT LAST Hem # 2 (WndowsCpu2): Maximum.SMR2 GPRINT MAX Hem # 10 (WndowsCpu2): Maximum.SMR2 GPRINT MAX Hem # 10 (WndowsCpu2): Current: GPRINT LAST BOOBDA Hem # 11 (WndowsCpu2): Current: GPRINT LAST BEENER Hem # 12 (WndowsCpu2): Maximum.SMR2 GPRINT LAST EESess Hem # 12 (WndowsCpu2): Maximum.SMR2 GPRINT LAST EESess X Hem # 12 (WndowsCpu2): Maximum.SMR2 GPRINT LAST EESess X Hem # 13 (WndowsCpu2): Maximum.SMR2 GPRINT LAST EESess X Graph Hem Inputs GPRINT MAX X X X Stat Source (WndowsCpu2): Maximum: GPRINT MAX X X Data Source (WndowsCpu2): Maximum GPRINT X	Item # 5	(WindowsCpu2): CPU2 Usage	LINE1	LAST	2175D9	₹ ★ ×
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点击"save"按钮回到主界面,完成作图模板的创建。

石头记出品

Save Successful.			
Graph Templates			Add
Search:	go clear		
<< Previous	Showing Rows 31 to 37 of 37 [1,2]		Next >>
Template Title**			
Unix - Available Disk Space			
Unix - Load Average			
Unix - Logged in Users			
Unix - Ping Latency			
Unix - Processes			
Windows - 4CPU Usage			
Windows - CPU Usage			
<< Previous	Showing Rows 31 to 37 of 37 [1, 2]		Next >>
ц.		Choose an action: Delete	▼ go

使用刚创建的作图模板,在 Devices 中选择要使用此模板的主机。在 Add Graph Template 下拉框中选择刚才创建的作图模板--Windows - CPU usage,然后点击添加按钮。

Associated Graph Templates		
Graph Template Name	Status	
1) Host MIB - Logged in Users	Not Being Graphed	×
2) Host MIB - Processes	Is Being Graphed (Edit)	×
 TCP MIB - Connection Statistics (conn/5min) 	Is Being Graphed (Edit)	×
Add Graph Template: Windows - CPU Usage		add

点击最上边的 <u>Create Graphs for this Host</u> 连接。选中 Windows - CPU usage 作图 模板,点击"create"按钮为主机创建监控图。

Graph Templates	
Graph Template Name	
Create: Host MIB - Logged in Users	
Create: Host MIB - Processes	
Create: TCP MIB - Connection Statistics (conn/5min)	
Create: Windows - CPU Usage	
Create: (Select a graph type to create)	

(3).创建主机模板(Host template)

在 console 选项卡下左侧菜单栏中点击 Host Templates 连接,打开新建主机模板窗口。

Templates Graph Templates Host Templates Data Templates

在新建主机模板窗口点击 Add 按钮添加"Host Templates"。

Host Templates		Add
Template Title**		
Cisco Router		
Generic SNMP-enabled Host		
Karlnet Wireless Bridge		
Local Linux Machine		
Netware 4/5 Server		
ucd/net SNMP Host		
Windows 2000/XP Host		
ц	Choose an action: Delete	▼ go

填写 Host Templates 名称,然后点击 create 按钮新建 Host Templates。

Host Templates [new]		
Name A useful name for this host template.	Windows 2000 server	
		cancel create

在"Associated Graph templates"下添加你想要添加到此主机模板下的作图模板,在 "Associated Data Queries"下添加你想要添加到此主机模板下的 Data Query 模板。

Host Templates [edit: Windows 2000 server]		
Name A useful name for this host template.	Windows 2000 server	
Associated Graph Templates		
1) TCP MIB - Connection Statistics (conn/5min)		×
2) Win2k - Memory Usage		×
3) Windows - 4CPU Usage		×
Add Graph Template: Cisco - CPU Usage	V	add
Associated Data Queries		
1) SNMP - Get Mounted Partitions		×
2) SNMP - Get Processor Information		×
3) SNMP - Interface Statistics		×
Add Data Query: Karlnet - Wireless Bridge Statistics 💌		add
		cancel save

点击"save"按钮完成主机模板的创建。

应用此主机模板,在 Devices 中新建主机,在 Host template 下拉框中选择刚刚创建的 主机模板--Windows 2000 Server。点击"create"按钮来新建主机。

Devices [new]			
Description Give this host a meaningful description.	woandae125		
Nostname Fill in the fully qualified hostname for this device.	Construction of the second sec		
Host 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.	Windows 2000 server		
Disable Host Check this box to disable all checks for this host.	Disable Host		
Monitor Host Check this box to monitor this host on the Monitor Tab.	P Monitor Host		
SNMP Optione			
SNMP Community Fill in the SNMP read community for this device.	public		
SNMP Username (v3) Fill in the SNMP v3 username for this device.			
SNMP Passmord (v3) Fill in the SNMP v3 password for this device.	[
SNMP Version Choose the SNMP version for this host.	Version 1 ×		
SNMP Port Enter the UDP port number to use for SNMP (default is 161).	161		
SNMP Timeout The chaximum number of miliseconds Cadi vill vait for an SNMP response (does not work with php-smmp support).	500		
			-
		cancel	create

点击最上边的 <u>Create Graphs for this Host</u> 连接。选中想要的作图模板,点击"create" 按钮为主机创建监控图。

将新建的监控图添加到 Graph Trees 节点上,先在 Graph Trees 创建一个节点,然后在 Graph Management 中选中想要添加到此节点的监控图,在 Choose an action 下拉框 中选择 Place on a Tree (此节点的根节点),点击 go 按钮。



Graph Management		14	Add
Filter by hosti (voandne 125 (600-630-660666) 💌	Searchi go clear		
<< Previous	Showing Rows 1 to 7 of 7 [1]	Next	.>>
Graph 11tle **	Template Name	Stare	
eroandme 125 - CPU Usage	Windows - 4CPU Uzage	120×500	V
woandme125 - Nemory Usage	Win2k - Memory Usage	120×500	V
woandme125 - Processes	Host MIB - Processes	120×500	F
woandme 125 - TCP Connection Statistics (5 minutes)	TCP MIB - Connection Statistics (conn/Smin)	120×500	F
woandmo125 - Traffic - CONSTRUMENTS (Intel(R) \$2540E)	Interface - Traffic (bits/sec)	120×500	1
moandme 125 - Used Space - C: Label: Seri	Host MIB - Available Disk Space	120×500	5
woandme125 - Used Space - Di Label: Seri	Host MIB - Available Disk Space	120×500	1
<< Previous	Showing Rows 1 to 7 of 7 [1]	Next	t>>
4	Choose an action: Place on a Tree (挑雜机房)		go

选择想要将监控图添加到的节点。

Place on a Tree (
When you click save, the following graphs will b selected below.	e placed under the brar	nch
 woandme125 - CPU Usage woandme125 - Memory Usage woandme125 - Processes woandme125 - TCP Connection Statistics (5 r woandme125 - Traffic - Construction (Intellight of the second seco	ninutes) I(R) 82540E)	
[root] DNS服务器	no	yes

点击"yes"按钮完成添加。

在 Graph Trees 察看添加过来的监控图,并可以调整监控图的显示位置。

Graph Trees [edit: 光细机图]			
Name A useful name for this graph tree.			
Sorting Type Choose how items in this tree will be sorted.	Manual Ordering (No Sorting) 💌		
Tree Items			Add
++			
Iben	Value		
E DNSE& a (Add)	Heading	* 4	
E DOMAS (Add)	Heading	**	
E Web### (Add)	Heading	* 4	
E (Add)	Heading	* 4	
E eserve Australia (Add)	Heading	**	
voandme125 - CPU Usage	Graph	+ +	
scandme125 - Memory Usage	Graph	* 4	• *
woandme125 - Processes	Graph	* 4	
voendme125 - TCP Connection Statistics (5 minutes)	Graph	* 4	
woandme125 - Traffic - dologication (Intel(R) 92540	(Graph	* 4	
scandme125 - Used Space - C: Label: Seri	Graph	* 4	
voandme125 - Used Space - Di Labeli Seri	Graph	* 4	
E Other (Add)	Heading	**	. *

七、Cacti 插件

Cacti 插件是对 cacti 的扩展。

要使用 cacti 插件必须先扩展 cacti 架构,来支持插件。

1. 安装 cacti 插件架构扩展

```
下载地址: http://cactiusers.org/downloads/patches/
```

当前版本是 V1.1, 是专门针对 cacti V0.8.6 设计的。

```
1).解压下载的 tar 包,你会得到一个 cacti-plugin-arch 目录
```

```
# tar -zxvf cacti-plugin-arch.tar.gz
```

```
# cd cacti-plugin-arch
```

Is

```
[root@lib cacti-plugin-arch]# ls
cacti-plugin-0.8.6i.diff files-0.8.6i LICENSE
cacti-plugin-0.8.6j.diff files-0.8.6j Readme.txt
[root@lib cacti-plugin-arch]#
```

2).有两中方法来安装 cacti 的插件架构扩展,第一种方法是使用 patch 文件, patch 文件包含了原始文件与修改后文件的不同之处,所以可以使用 patch 文件来得到新的 文件。第二种方法是使用 pre-patched 文件进行直接覆盖,将与 cacti 相对应版本的 files-0.8.6*目录下的文件直接拷贝到 cacti 目录下进行覆盖。在此选择使用 patch 文件进行安装(这也是官网推荐的方法)。将与 cacti 相应版本的 cacti-pligin-0.8.6*.diff 文件拷贝到 cacti 目录下,然后使用 patch 命令进行安装。

cp cacti-plugin-0.8.6j.diff /usr/local/apache/htdocs/cacti

```
//备份 cacti 目录,以备插件扩展安装失败后能恢复到原状态
```

```
# cd /usr/local/apache/htdocs
```

```
# cp -r cacti ./cacti.bak
```

cd ./cacti

//首先使用以下命令进行测试

```
# patch -p1 -N --dry-run < cacti-plugin-0.8.6j.diff</pre>
```

//以上命令成功后,使用以下命令进行安装

```
# patch -p1 -N < cacti-plugin-0.8.6j.diff</pre>
```

3).安装后配置,首先查看你的 cacti 配置文件,看 cacti 相关的数据库信息是否被覆盖,如果被覆盖请直接从备份中拷贝一份到配置文件目录。

cp ../include/config.php ./include/config.php

```
打开 cacti 配置文件,找到以下选项
```

```
$config['url_path'] = "/";
```

如过你的 cacti 能够在浏览器中使用以下方法直接访问,则不用修改 cacti 配置文件。

http://www.youdomain.com 或

http://cacti 机器 ip

如果 cacti 在浏览器中使用以下方法直接访问,

http://www.youdomain.com/cacti 或

http://cacti 机器 ip/cacti

```
则$config['url_path'] = "/";必须被修改为$config['url_path'] = "/cacti/";
```

注意前后的/不能丢。

到此 cacti 插件结构的扩展完成,现在可以下载并安装你需要的 cacti 插件了。

安装插件

插件的安装、升级、移除是很容易的,在安装插件前你必须以确保安装了 cacti 插件结构扩展。

1).下载插件,在此以 Monitor 插件为例。

Monitor 插件下载地址: http://cactiusers.org/downloads/ 解压下载的 tar 包。

tar -zvcf monitor-0.7.tar.gz

解压后你会得到一个 monitor 目录。

2).安装 Monitor,只需要将 monitor 目录拷贝到 cacti/plugins/目录下即可。如果 是升级安装,只需要完全覆盖原 monitor 目录即可。

3). 激活 monitor 插件, 修改 cacti 配置文件 (cacti 目录下的 include/config.php)。 在配置中查找**\$plugins = array()**;行,在此行下面加入:

\$plugins[] = 'monitor';

注意:上面 monitor 的名字必须与 cacti/plugins/目录下插件目录的名字相同。

- 4).有些插件需要进行额外的配置,请根据插件的安装文档进行配置,在此略述。
- 5).移除插件时只要修改 cacti 配置文件,注释掉与插件相关的行即可。

如:

//\$plugins[] = 'monitor';

6).在 console 选项卡下,点击左侧菜单中的 Settings 链接,在右侧出现的 web 页 中点击 Misc 选项卡来配置 Monitor 插件。

General Paths Poller Graph Export Visual	Authentication Alerting/Thold 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)	10
Show Icon Legend Check this to show an icon legend on the Monitor display	Show Icon Legend

以下所看到的是 Monitor 选项卡下所监控的机器状态。当有机器 Down 掉后,相应机器图标将由绿色变成红色,并发出声音进行报警。

console graphs threshid monitor weathermap	settings 🕈 🚍 🛶
Console -> Monitoring	Logged in as admin (Logout)
Last Refresh : 4	:02:46 pm
Mute	
Localhost	Win2k3

3. 安装 Threshold 插件

v0.3.5.1 版下载地址: http://download.cactiusers.org/downloads/thold.gzip **v0.3.5.1** 版为当前最新版本,此版本在 cacti V0.8.6j 上安装时有问题,提示一些函数找不到,所 以在此使用 **v0.3.4** 版。

v0.34版下载地址: http://cactiusers.net/downloads/plugins/thold-0.3.4.tar.gz 1). 安装 Threshold 插件,只需将解压出来的 Thold 目录拷贝到 cacti/plugins/目

录下,并修改 cacti 配置文件(cacti 目录下的 include/config.php)。在配置中查找 **\$plugins = array();**行,在此行下面加入: **\$plugins[] = 'thold';** 刷新 cacti 首页,你将看到多出来一个 Threshld选项卡。 下图是添加 Threshold 插件和 Monitor 插件后的 cacti 界面:

选中 console 选项卡,在左侧菜单中点击 Settings,然后点击 Alerting/Thold 选项 卡,来设置 Threshold 插件。



General	Paths	Poller	Graph Export	Visual	Authentication	Alerting/Thold	Misc	
Cacti Settir	ıgs (Alerti	ing/Thold)						
General								
Base URL Cacti base UR	RL			[http://192.168.0.200/cac	:ti/		
Display Alert If checked, o will be display	s Only nly hosts an yed	nd data sour	ces that have an aler	t active	Display Alerts Only			
Display Host If checked, h thresholds	Status ost status v	will be display	yed together with the		Display Host Status			
Syslogging These messa these sent to do so	ages will be a remote t	sent to your box, you mu	local syslog. If you v st setup your local sy	ould like slog to	Syslogging			
Syslog Level This is the pr	iority level f	that your sys	log messages will be	sent as.	Warning 🔽			
Thresholds po Number of th	e r page resholds to	display per	page		30			
Default Aler	ting Options	5						
Send notifica Enable sendi	tions ng alert not	ification			Send notifications			
Dead Hosts n Enable Dead/	Recovering	s host notifica	ation		Dead Hosts notifications			
Alert e-mail Default Email multiple addr	address(e: esses)	s) to send al	erts to: <mark>(</mark> use comma:	s to for	toakee@sina.com			
Send alerts a If checked, the with no graph embedded in	ns text his will caus h. The defau the email.	e all alerts to ult is HTML e	o be sent as plain tex mails with the graph	t emails	Send alerts as text			
Weekend ex If this is chec	emptions ked, thold	will not run o	on weekends.		Weekend exemptions			
Default Trigg Number of co the threshold	er Count Insecutive ti for an aler	imes the dat t to be raise	a source must be in l d	breach of	1			
Re-Alerting Repeat alert	after specif	ied number (of cycles.		12			
Alert Text Me This is the m threshold ale removed for may be used <descriptic <currentva <graph></graph></currentva </descriptic 	essage essage tha rts (255 Ch text only er DN> <host .LUE> <thr< td=""><td>t will be disp ar MAX). HTI nails. There NAME> <tim ESHOLDNAM</tim </td><td>layed at the top of al ML is allowed, but will are several descripto IE> <url> <graphic E> <dsname> <subj< td=""><td>l be rs that)> ECT></td><td><pre>(html><body>An alert has attention. <(HOSINAME>) </body></pre></td><td>s been issued that ong>Host: URL:</td><td>requires your <description></description></td><td></td></subj<></dsname></graphic </url></td></thr<></host 	t will be disp ar MAX). HTI nails. There NAME> <tim ESHOLDNAM</tim 	layed at the top of al ML is allowed, but will are several descripto IE> <url> <graphic E> <dsname> <subj< td=""><td>l be rs that)> ECT></td><td><pre>(html><body>An alert has attention. <(HOSINAME>) </body></pre></td><td>s been issued that ong>Host: URL:</td><td>requires your <description></description></td><td></td></subj<></dsname></graphic </url>	l be rs that)> ECT>	<pre>(html><body>An alert has attention. <(HOSINAME>) </body></pre>	s been issued that ong>Host: URL:	requires your <description></description>	
	_							
Default Base	line Option	s						
Enable sendi	ng alert for	baseline not	ifications		Baseline notifications			
Default Base Number of co the calculated	line Trigger insecutive ti baseline t	• Count imes the dat hreshold for	a source must be in t an alert to be raised	preach of [3			
Baseline refe This is the de	erence in the	e past defau used in crea	lt ating thresholds or ter	nplates.	86400			
Baseline time This is the de	e range def efault value	ault used in crea	ating thresholds or ter	nplates.	10800			
Baseline dev This is the de	iation perce	entage used in crea	ating thresholds or ter	nplates.	20			
Emailing Opt	ions						Send a Test Em	ail
Mail Services					SMTP			

Default Baseline Options	
Baseline notifications Enable sending alert for baseline notifications	Baseline notifications
Default Baseline Trigger Count Number of consecutive times the data source must be in breach of the calculated baseline threshold for an alert to be raised	3
Baseline reference in the past default This is the default value used in creating thresholds or templates.	86400
Baseline time range default This is the default value used in creating thresholds or templates.	10800
Baseline deviation percentage This is the default value used in creating thresholds or templates.	20
Emailing Options	Send a Test Email
Mail Services Which mail service to use in order to send mail	SMTP
From Email Address This is the email address that the threshold will appear from.	toakee@sina.com
From Name This is the actual name that the threshold will appear from.	cacti
Sendmail Options	
Sendmail Path This is the path to sendmail on your server. (Only used if Sendmail is selected as the Mail Service)	/usr/sbin/sendmail
SMTP Options	
SMTP Hostname This is the hostname/IP of the SMTP Server you will send the email to.	smtp.sina.com
SMTP Port This is the port on the SMTP Server that SMTP uses.	25
SMTP Username This is the username to authenticate with when sending via SMTP. (Leave blank if you do not require authentication.)	toakee
SMTP Password This is the password to authenticate with when sending via SMTP. (Leave blank if you do not require authentication.)	••••••
	cancel save

设置完成后在 **console** 选项卡下左侧菜单中点击 Threshold Templates。

Templates
Graph Templates
Host Templates
Data Templates
Threshold Templates

点击 Add 按钮来添加一个 Threshold 模板。

Threshold Templates							Add
Data Template	Data Source Name	High	Low	Trigger	Repeat	Email	
PING - Advanced Ping v1.3	Loss	99		3	12	toakee@sina.com	
Unix - Hard Drive Space	hdd_used		1000	1	12	toakee@sina.com	
Unix - Logged in Users	Logged In Users	5		1	12	toakee@sina.com	
Ļ					Cho	ose an action. Delete	v go

Choose an action: Delete 🔽 go

在此,以添加一个监控硬盘空间的 Threshold 模板为例。

Threshold Template Wizard	
Please select a Data Template : Unix - Hard Drive Space	
go	

在 Data Field 下拉框中选择 hdd_free,然后点击 go 按钮。

Threshold Template Wizard
Date Template Name : Unix - Hard Drive Space 💙 Please select a Data Field : hdd_free 💙
go

填写以下信息,在 Low Threshold 文本框中填入 1000, 意思是当剩余的硬盘空间小 于 1000M 时,发送邮件报警。在 Threshold CDEF 下拉框选择 Divide by 1024, 填入警报邮箱,完成Threshold 模板的添加。



Mandatory settings	
Data Template Data Template that you are using. (This can not be changed)	Unix - Hard Drive Space 🗸
Data Field Data Field that you are using.	hdd_free 💌
Enabled Whether or not this threshold will be checked and alerted upon.	✓ Enabled
High Threshold If set and data source value goes above this number, alert will be triggered	
Low Threshold If set and data source value goes below this number, alert will be triggered	1000
Trigger Count Number of consecutive times the data source must be in breach of the threshold for an alert to be raised. Leave empty to use default value (Default: 1 cycles)	1
Baseline monitoring	
Baseline monitoring When enabled, baseline monitoring checks the current data source valu- against a value in the past. The available range of values is retrieved and a minimum and maximum values are taken as a respective baseline reference. The precedence however is on the "hard" thresholds above.	e Baseline monitoring
Reference in the past Specifies the relative point in the past that will be used as a reference. The value represents seconds, so for a day you would specify 86400, for a week 604800, etc.	86400
Time range Specifies the time range of values in seconds to be taken from the reference in the past	10800
Baseline deviation UP Specifies allowed deviation in percentage for the upper bound threshold. If not set, upper bound threshold will not be checked at all.	·
Baseline deviation DOWN Specifies allowed deviation in percentage for the lower bound threshold. If not set, lower bound threshold will not be checked at all.	
Baseline Trigger Count Number of consecutive times the data source must be in breach of the baseline threshold for an alert to be raised. Leave empty to use default value (Default: 3 cycles)	3
Other setting	
Threshold CDEF Apply this CDEF before returning the data.	Divide by 1024
Re-Alert Cycle Repeat alert after specified number of cycles. Leave empty to use default value (Default: 12 cycles)	12
Sent notifications to default alert address Determines if the notifications will be sent to e-mail address specified in global settings.	Use global control: On 🗸
Alert E-Mail You may specify here extra e-mails to receive alerts for this data source	test@sina.com

应用刚才创建的 Threshold 模板。在 console 选项卡下点击 Devices,选择要应用此 模板的 Host,点击最上面的 **Create Graphs for this Host** 链接,然后 点击 **Auto-create thresholds** 链接来应用刚创建的 Threshold 模板。

设置完成后在 CONSOLe 选项卡下左侧菜单中点击 Thresholds 。

Management
Graph Management
Graph Trees
Data Sources
Devices
Thresholds

在此可以管理已创建的警报。

石头记出品

Last Poll: 2007-08-29 18:20:03

<< Previous		Showing	Rows 1 t	o 8 of 8	[1]			Next	>>
Description	High Threshold	Low Threshold	Trigger	Repeat	Baselining	Current	Currently Triggered	Enabled	
Localhost - Logged in Users [users]	5	n/a	1	12	off	1	no	on	
Localhost - Advanced Ping [loss]	99	n/a	3	12	off	0	no	on	
Localhost - Free Space - /dev/mapper/Vol [hdd_used]	n/a	1000	1	12	off	4199.3867	no	on	
Localhost - Advanced Ping [loss]	99	n/a	3	12	off	0	no	on	
Localhost - Advanced Ping [loss]	99	n/a	з	12	off		no	on	
Localhost - Advanced Ping [loss]	99	n/a	3	12	off		no	on	
Win2k3 - Advanced Ping [loss]	99	n/a	з	12	off	0	no	on	
Win2k3 - Advanced Ping [loss]	99	n/a	3	12	off	0	no	on	
L,						Choose	a an action.	Delete 🗸 🕻	qo

Choose an action: Delete 🗸 👩

点击 threshld 选项卡可以查看警报的触发情况。

console graphs thold monitor weathermap settings 🕤 🚍 🕰									
onsole -> Thresh		Logged in as admin (Logo							
			Last Poll: 2007-08-26 16	5:00:03					
Hosts			Thresholds						
Host	Status	ID	Description / Click for graph	High Threshold	Low Threshold	Baselining	Current	Currently	
Win2k3	DOWN	13	Localbost - Longed in Users [users]	5		off	0	00	
Localhost	up	6	Localhost - Advanced Ping [loss]	99		off	0	no	
		15	Localhost - Free Space - /dev/mapper/Vol [hdd_used]		1000	off	4200.4297	no	
		8	Localhost - Advanced Ping [loss]	99		off	0	no	
		2	Win2k3 - Advanced Ping [loss]	99		off	0	no	
		4	Win2k3 - Advanced Ping [loss]	99		off	0	no	

4. 其它插件

其它插件可到 http://cactiusers.org/downloads/自行下载安装,在此只略述一二。 1) .Discovery: This plugin adds the ability to auto-discover devices on a subnet that are not monitored by Cacti and and tells you if they are SNMP enabled.

2) . Flowviewer: A simple viewer for viewing reports based on data from flows created by Netflow.

3) .Settings: This plugin houses common settings and functions used by different plugins.

4).Network Weathermap:这是一个比较复杂的 cacti 插件,他需要 GD 库的支持,可以参照 cacti 的安装小节来支持 GD 库。使用它可以画出漂亮的网络状况图。

官网说明: http://www.network-weathermap.com/node/79

下载地址: http://www.network-weathermap.com/download 安装方法:

http://www.network-weathermap.com/manual/0.92/pages/install-cacti-editor.html

八、参考

Cacti 官网: http://www.cacti.net/index.php Cacti 官网论坛: http://forums.cacti.net/ Cacti 文档: http://docs.cacti.net/ Cacti 插件: http://cactiusers.org/index.php Network Weathermap: http://www.network-weathermap.com/ RRDTool 官网: http://oss.oetiker.ch/rrdtool/ NET-SNMP 官方网站: http://www.net-snmp.org/

Apache 官网: http://httpd.apache.org/ MySQL 官网: http://www.mysql.com/ PHP 官网: http://www.php.net/

