Exercises

Cacti Installation and Configuration

Exercises

Your Mission...

– Install Cacti

– Create device entry for your local router

– Create device entries for your local servers

– Create entries for class router and switch

– Create graphs for each item

– Place PCs, Routers, Switches in a tree hierarchy of your design.

Use the Network Diagram on the class wiki as a reference.

Installation: Ubuntu Server 12.04

In Ubuntu Cacti 0.8.8a with the Plugin Architecture is not yet part of the main distribution. We need a few extra steps to install Cacti 0.8.8a at this time:
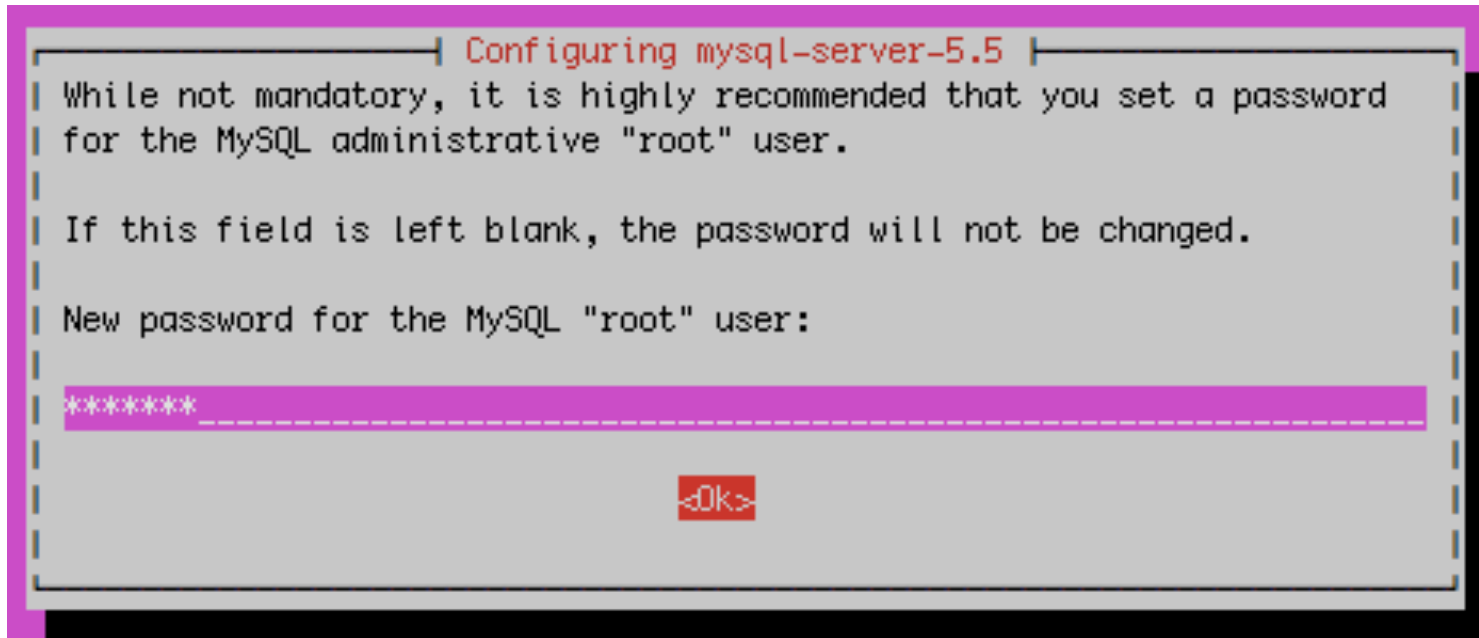
```
# apt-get install python-software-properties
    After this operation, 22.0 MB of additional disk space will be used.
    Do you want to continue [Y/n]? Y
# add-apt-repository ppa:micahg/ppa
    You are about to add the following PPA to your system:
     These are packages that I wanted backported to the current stable release.
     More info: https://launchpad.net/~micahg/+archive/ppa
    Press [ENTER] to continue or ctrl-c to cancel adding it
       (Press <ENTER> at this point)
# apt-get update
# apt-get install cacti
    0 upgraded, 62 newly installed, 0 to remove and 0 not upgraded.
    Need to get 55.4 MB of archives.
    After this operation, 175 MB of additional disk space will be used.
    Do you want to continue [Y/n]? Y
```
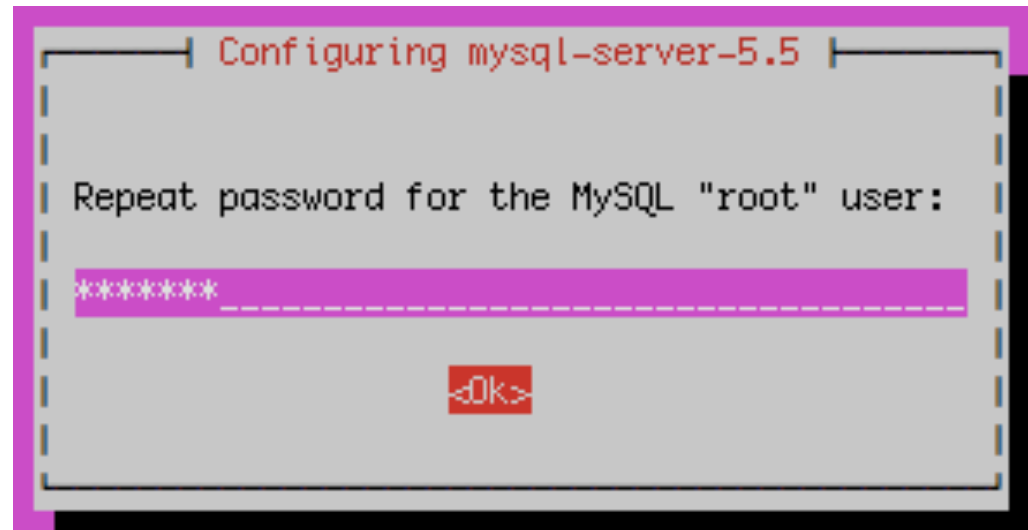
Installation: 2

We may have already done this for you. If so, you can use these slides for informational purposes. Skip to the Cacti *Web* installation steps to continue…

Use the workshop root password *given in class.*
Please do not use a different password.

Installation: 3

Again, use the workshop root password

Installation: 4

Informational message only. Not an issue. Press OK to continue.

Installation: 5

We are using Apache2. Be sure this is chosen
then highlight <Ok> and press <ENTER> to continue.

Installation: 6

Choose <Yes> and press <ENTER> to continue.

Installation: 7
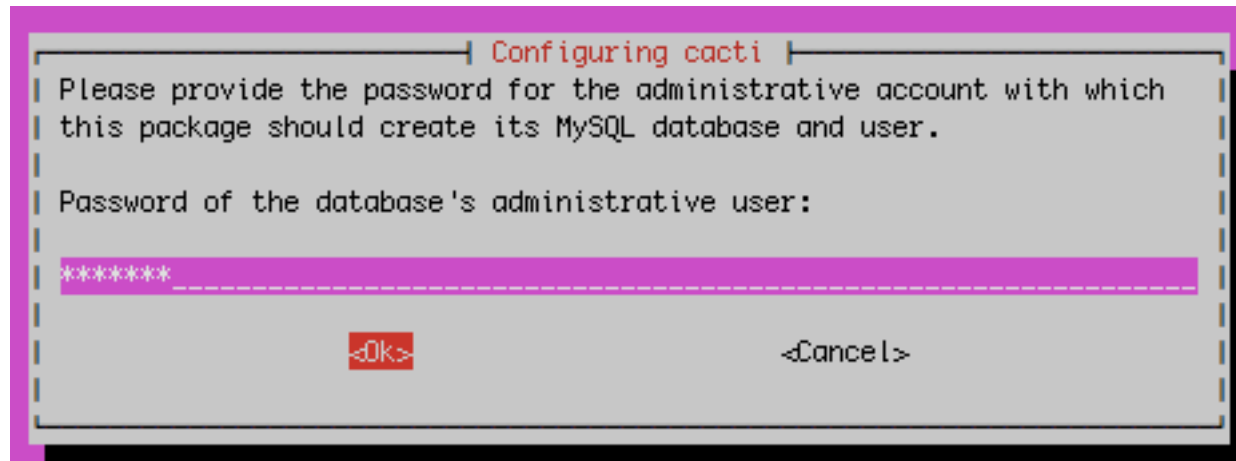
Use the workshop **root password** you provided earlier.

Installation: 8

```
┤ Configuring cacti ├
Please provide a password for cacti to register with the database
server.  If left blank, a random password will be generated for you.

MySQL application password for cacti:

********

         <Ok>                          <Cancel>
```
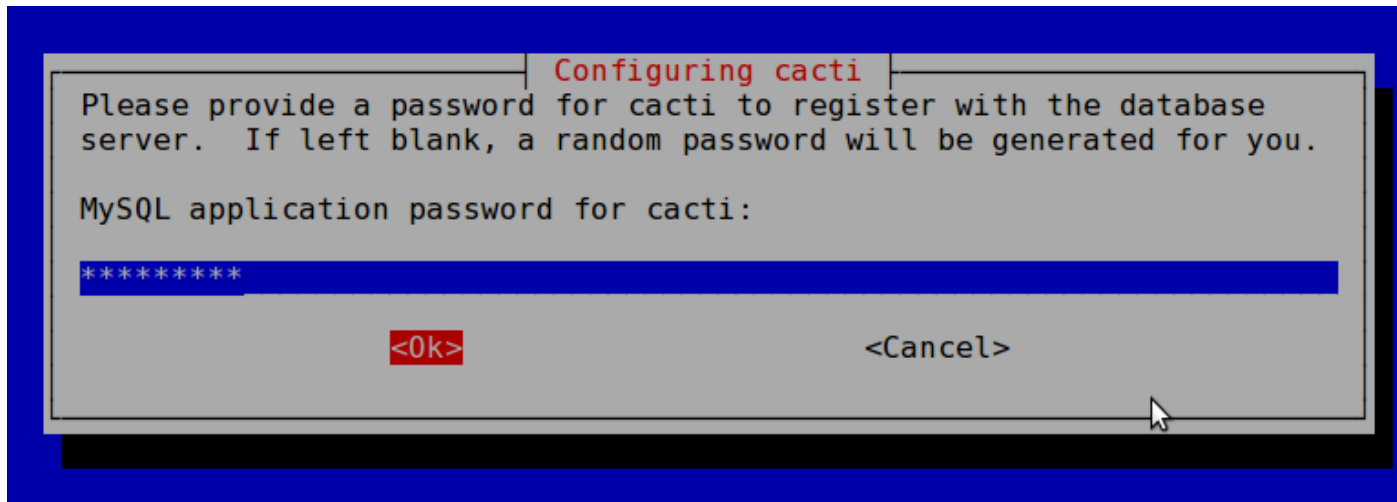
Use any password you wish.
This is *not* the workshop root password.

Installation: 9
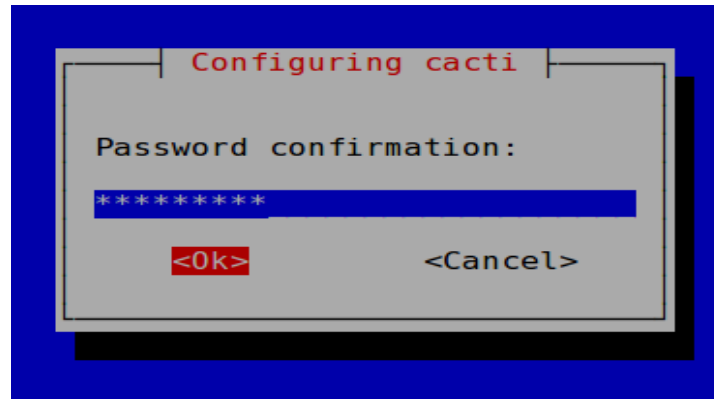
Repeat the password you just entered in the previous screen.

Cacti: Installation - Web

Now use a web browser and open the following address:

http://pcN.ws.nsrc.org/cacti

You will see the following...

Cacti: Installation - Web

Cacti Installation Guide

Thanks for taking the time to download and install cacti, the complete graphing solution for your network. Before you can start making cool graphs, there are a few pieces of data that cacti needs to know.

Make sure you have read and followed the required steps needed to install cacti before continuing. Install information can be found for Unix and Win32-based operating systems.

Also, if this is an upgrade, be sure to reading the Upgrade information file.

Cacti is licensed under the GNU General Public License, you must agree to its provisions before continuing:

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

Next >>

Press "Next >>"

Cacti: Installation - Web

Cacti Installation Guide

Please select the type of installation

New Install ▾

The following information has been determined from Cacti's configuration file. If it is not correct, please edit 'include/config.php' before continuing.

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

Next >>

Choose "New Install" and press "Next >>" again.

Cacti: Installation - Web

Cacti Installation Guide

Make sure all of these values are correct before continuing.

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

/usr/bin/rrdtool

[OK: FILE FOUND]

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

/usr/bin/php

[OK: FILE FOUND]

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

/usr/bin/snmpwalk

[OK: FILE FOUND]

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

/usr/bin/snmpget

[OK: FILE FOUND]

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

/usr/bin/snmpbulkwalk

[OK: FILE FOUND]

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

/usr/bin/snmpgetnext

[OK: FILE FOUND]

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

/var/log/cacti/cacti.log

[OK: FILE FOUND]

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

NET-SNMP 5.x ⇕

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

RRDTool 1.4.x ⇕

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

Finish

Your screen should look like this. If it does not ask your instructor for help.

Press "Finish"

Cacti: First Time Login

User Login

Please enter your Cacti user name and password below:

User Name:

Password:

Login

First time login use:

User Name:	*admin*
Password:	*admin*

Cacti: Change Default Password

User Login

*** Forced Password Change ***

Please enter a new password for cacti:

Password: ········

Confirm: ········

Save

Now you must change the *admin* password.

Please **use the workshop password** provided in class.

Cacti: Fix Localhost Graphs

There is a minor bug with Cacti version 0.8.8a. In order to start generating the default graphs for the Localhost entry (preconfigured at install) you need to do the following:

1. After logging in click on the "console" tab.
2. Click on "System Utilities" bottom left of the screen.
3. Click on "Rebuild Poller Cache"

That's it. Now if you click on the "graphs" tab you will see graphs for your localhost appear within 5 minutes.
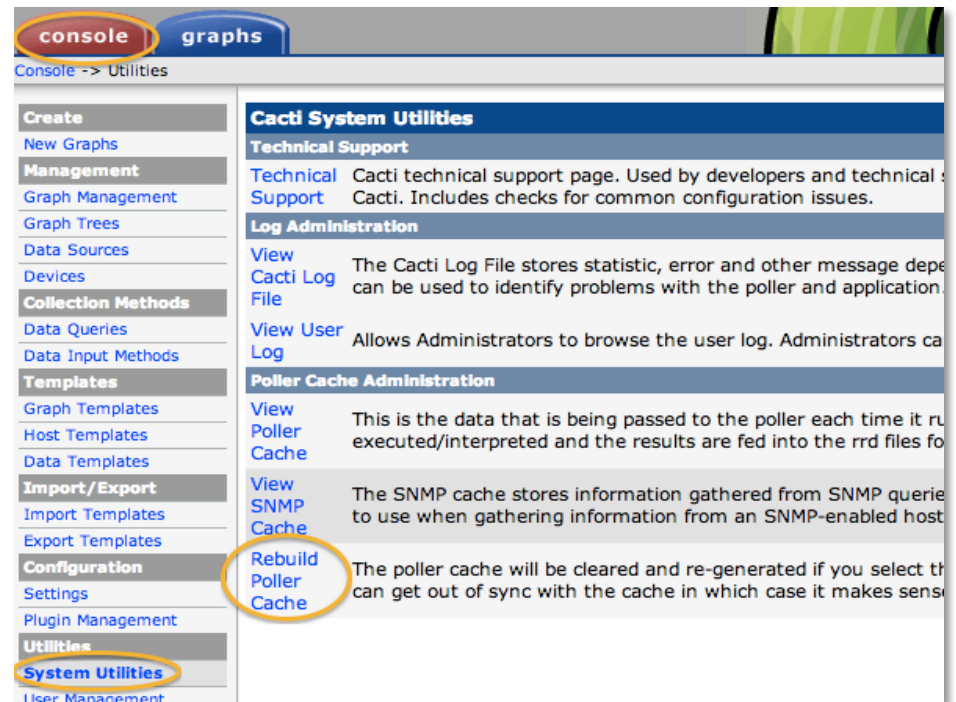
Cacti: Final Installation Steps

Back at your system prompt you need to enter in a few final commands to clean up our software repositories and fix a minor bug in the current Cacti 0.8.8.a package:

```
# add-apt-repository -r ppa:micahg/ppa
    You are about to remove the following PPA from your system:
     These are packages that I wanted backported to the current stable release.
     More info: https://launchpad.net/~micahg/+archive/ppa
    Press [ENTER] to continue or ctrl-c to cancel removing it
       (Press <ENTER> at this point)
```

Next you need to create some logical links to support the Cacti Plugin Architecture properly:

```
# ln -s /usr/share/cacti/site/include /usr/local/share/cacti/include
# ln -s /usr/share/cacti/site/lib /usr/local/share/cacti/lib
```

You are now done installing Cacti version 0.8.8a.

Configuring cacti

- Create device entry for your local router
- Create device entries for your local servers
- Create device entry for your classroom router
- Create device entry for your classroom switch
- Create graphs for each item
- Place PCs, Routers, Switches in a tree hierarchy of your design.
- Add as many devices from other groups as you wish.
- (**Optional**: add additional devices using the command line scripts.)
- Use the Network Diagram on the class wiki as a reference.

Additional Cacti Exercises

Available as part of the workshop agenda page on your classroom wiki.