Introduction

Ok. So you've got a brand new Linux box. Now what?

How do you:

- Keep your system updated?

- Apply security fixes?

- Install the latest cool package?

Introduction

Or, you just got a job as a system administrator for a collection of servers.

Is there a way for you to manage multiple systems all at once?

Yes. The **Red Hat Network** (**RHN**)

What is RHN?

- Subscription Service (paid for all by several units at ISU)

- A database and repository maintained by Red Hat

- For ISU, it is also a proxy server

What is RHN?

- Web and command line/GUI interface for maintaining your system

- A daemon (service) running on your system

- Source of initial distribution ISOs

How does it work?

You need the RHN client, **up2date** installed on your system

Inform your system that it should use the RHN, a proxy of RHN or a satellite of RHN. For ISU, that means pointing your system to our proxy server, **cyclops.iastate.edu**.

Do this by running the configuration GUI or modifying the configuration file /etc/sysconfig/rhn/up2date

How does it work?

Or let us do it for you:

```
# wget http://cyclops.iastate.edu/bootstrap.sh

# sh ./bootstrap.sh --register <activation_key>
```

This registers your system with the RHN and instructs RHN to use our proxy server for downloading cached packages.

Your activation key also subscribes the system to various *channels*. We can customize the channels for you.

How does it work?

Now what? Why isn't it doing anything? Computer? Computer?

You need to tell it to do something:

- Manually via **up2date** calls

- Using the web interface at rhn.redhat.com

The Web Interface

Allows you to view

- All systems you have registered

- All groups you maintain

- Available channels

- Available packages

- Available errata and updates

The Web Interface

Allows you to

- Apply errata updates

- Schedule actions

- Automate the updates

- Download packages and ISOs

Command Line Interface/GUI

Allows you to view

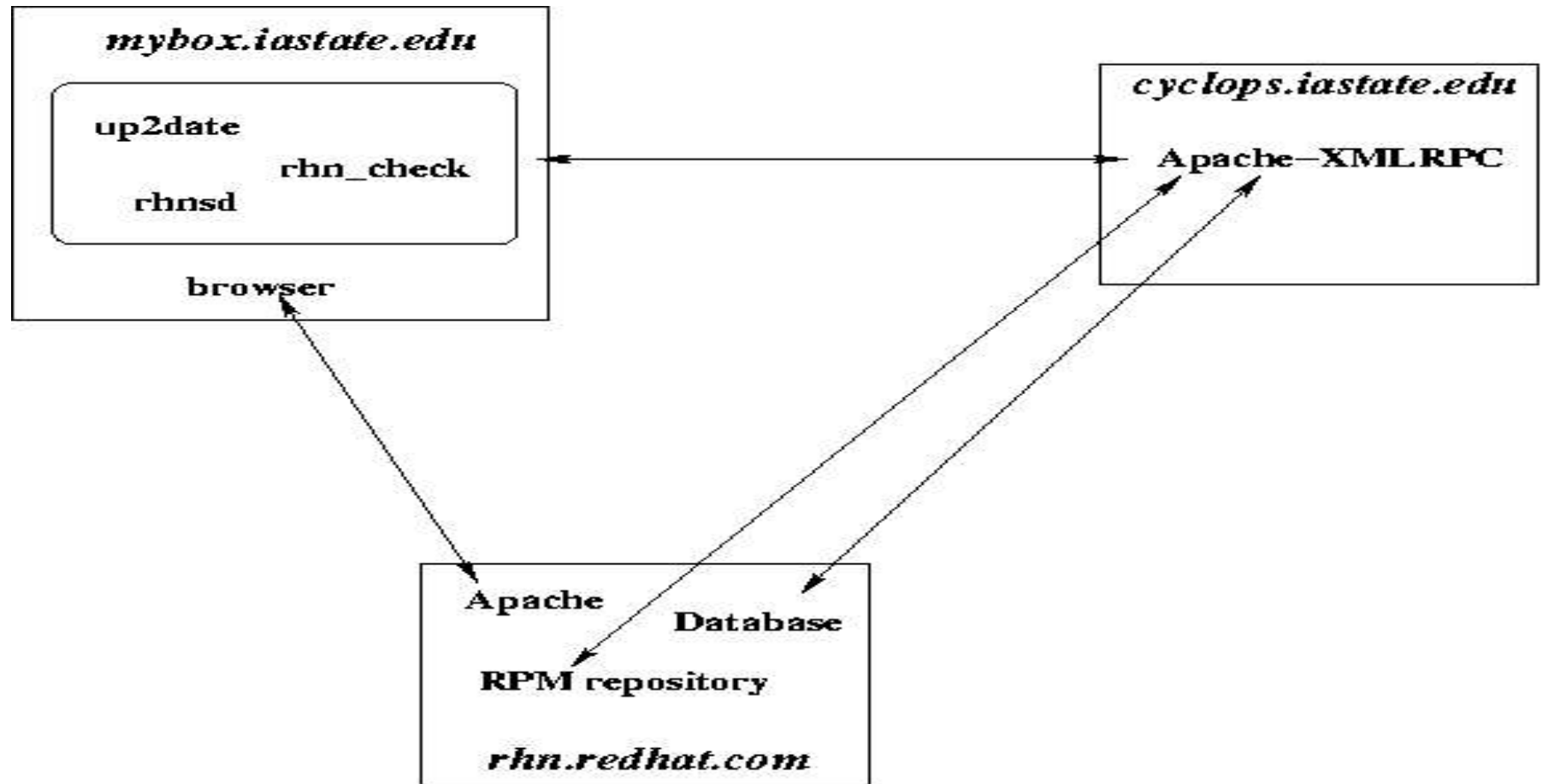- Current channel subscriptions

- Available packages (all or just those not installed)

Allows you to download packages

Allows you to apply updates

Putting It All Together

Exercise

Open a Terminal Window
(We'll need this for the command line interface)

- Through the applications menu (the Red Hat)

    (Red Hat) -> System Tools -> Terminal

- Right click on the desktop and choose Open Terminal

Exercise

Registering a System with RHN

```
# wget http://cyclops.iastate.edu/pub/bootstrap.sh


# sh ./bootstrap.sh --dag --register <activation_key>
```

Exercises

up2date

To which channels is your computer subscribed?

    # **up2date** *--show-channels*

Which packages are available in these channels?

    # **up2date** *--show-available --show-channels*

How do I see every package in these channels?

    # **up2date** *--showall --show-channels*

Exercises

The Web Interface

- Login to *rhn.redhat.com* with your RHN account ID (**isu**-NetID)

- Where to change your password?

    Click on *Your Account* on the left side of the page

- How do you request that Red Hat notify you of new updates and the status of your systems?

    Click on *Your Preferences* on the left side of the page

Exercises

The Web Interface

- What channels are available?
    Click on *Channels* at the top of the page

- What packages are available in the Red Hat Enterprise Linux WS v4 for 32 bit x86 channel?
    Click on *Red Hat Enterprise Linux WS v4 for 32 bit x86*
    Click on *Packages* at the top of the page

- Find the ISOs
    Click on Channels; Click on *Download Software* on the left side
    Click on *Red Hat Enterprise Linux WS v4 for 32 bit x86*

Exercise

Finding Information About Your System

Find your system

    Click on *Systems* at the top of the page
    Locate your system in the list

          OR

    Enter your system's name in the search box

Click on the system name.

Click some tabs at the top of the listing and explore your system

Exercise

Applying Errata

Find the Errata for your system

    Under the system's name click on *Software* and then click on *Errata*

Schedule errata updates

    Click the check box next to one or more errata
    Click the *Apply Errata* button at the bottom of the page
    Click the *Confim* button at the bottom of the page

Exercise

Applying Errata

Force the system to check with the RHN (or wait four hours):

In a terminal window run

rhn_check

Exercise

Automatic Errata Updates

Find your system

Click on the *Details* tab

Click on the *Properties* Tab

Click the check box next to *Automatic application of relevant errata*

Click the *Update Properties* button at the bottom of the page

Exercise

Subscribing to Channels

Find your system

Locate the **ISL** (*Iowa State Linux*) channel

      Click on the Software tab
      Click on the *Software Channels* tab to show the channels available
      for your system

Examine the contents of the channel

      Click on the name of the channel
      Click on the *Packages* tab at the top of the page
      Click on a package name
      Click on the *File List* tab at the top of the page

Exercise

Subscribing to Channels

Find your system

Locate the **ISL** (*Iowa State Linux*) channel

Subscribe your system to that channel

     Click the check box next to *Iowa State Linux WS*
     Click the *Change Subscriptions* button at the bottom of the page

Exercise

Installing Packages

Install a package from the Iowa State Linux channel:

At a terminal window, enter:

up2date -i isl-base

Working With Groups

Using one *activation key*, you can manage several systems

Systems become associated with a **System Group**

Errata for a System Group can be applied with one action

System Groups and collections of individual systems can be manipulated simultaneously as **system sets** with the **System Set Manager**

Exercise

Viewing Systems and System Groups

At the Red Hat Network web site click on the *Systems* tab at the top of the page

Click on the *Systems* link on the menu on the left side of the page

View only out-of-date, inactive or unentitled systems by using the links in the submenu on the left side of the page

Click on the *System Groups* link on the menu on the left side of the page

Exercise

Using the System Set Manager

Click on the *System Groups* link or the *Systems* link on the menu on the left side of the page

For groups:

Click the *Use Group* button to the right of a system group name

For individual systems:

Click the check box next to the system name and click the *Manage* button at the top right of the page or click the *System Set Manager* link on the left side of the page

Exercise

Using the System Set Manager

Apply errata updates to the system set:

- Click the *Errata* tab at the top of the System Set Manager page

- Click the check box next to the errata you wish to apply

- Click the *Apply Errata* button at the bottom of the page

- Do NOT schedule the update

Verify any updates later by choosing the system and clicking the *Events* tab at the top of the page

Other Packages

APT/Yum Repositories

Red Hat doesn't have EVERYTHING

Sometimes you need to install other packages.

APT/Yum repositories are another method for installing and managing systems and dependencies.

We maintain a mirror of several repositories at

http://rh-mirror.linux.iastate.edu

Other Packages

Example: Dag Wieers Repository

up2date can "talk" to **yum** repositories

Modify /etc/sysconfig/rhn/sources adding the lines:

Dag RPM Repository for Red Hat Enterprise Linux
yum dag http://dag.linux.iastate.edu/redhat/el4/$ARCH/dag

(We already did this when we ran bootstrap – –dag)

Other Packages

Example: Dag Wieers Repository

Install the **aircrack** package from the Dag Wieers repository:

    #up2date –install aircrack

RHN Alert Applet

The "Flashing Icon"

Windows users may like "reminders"

The RHN Alert Notification applet can be enabled to graphically inform you of the status of your system

Checking in with RHN

Critical updates available

System is up-to-date

RHN Alert Applet

The "Flashing Icon"

If the alert agent is not running, start it from the applications menu

(Red Hat) -> System Tools -> Red Hat Network Alert Icon

You can then click on the icon to start **up2date**