

Network Management & Monitoring

Request Tracker (RT) Installation and Configuration

Notes:

- Commands preceded with "\$" imply that you should execute the command as a general user - not as *root*.
- Commands preceded with "#" imply that you should be working as the *root* user.
- Commands with more specific command lines (e.g. "RTR-GW>" or "mysql>") imply that you are executing commands on remote equipment, or within another program.
- If a command line ends with "\" this indicates that the command continues on the next line and you should treat this as a single line.

Exercises

Exercise 0

Log in to your PC or open a terminal window as the sysadm user.

Exercise 1

Install the necessary packages for RT You should have mysql-server already, but we do the install just in case. This won't cause problems.

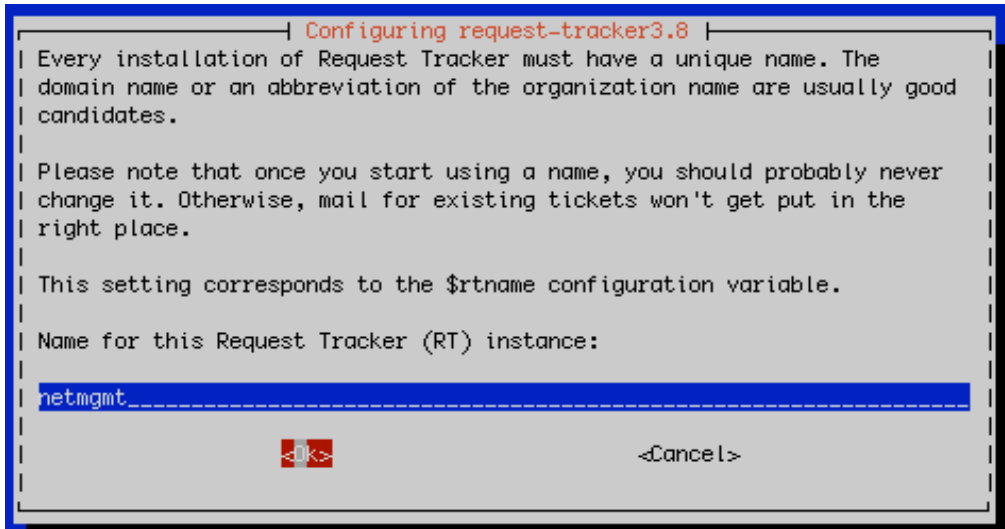
```
$ sudo apt-get install rt3.8-apache2
$ sudo apt-get install rt3.8-clients
$ sudo apt-get install rt3.8-db-mysql
$ sudo apt-get install request-tracker3.8
$ sudo apt-get install mutt
```

A quicker way to do this is to specify all the packages on a single line. (Hint, you can copy and paste this if you wish):

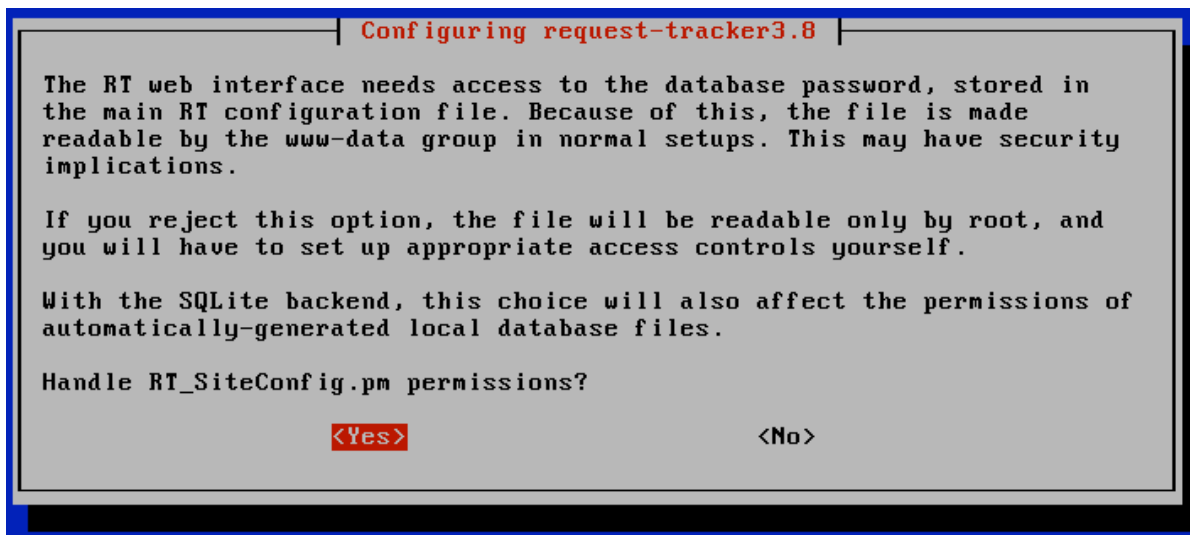
```
$ sudo apt-get install rt3.8-apache2 rt3.8-clients \
rt3.8-db-mysql request-tracker3.8 mutt
```

Respond "Yes" when prompted if you wish to install the packages.

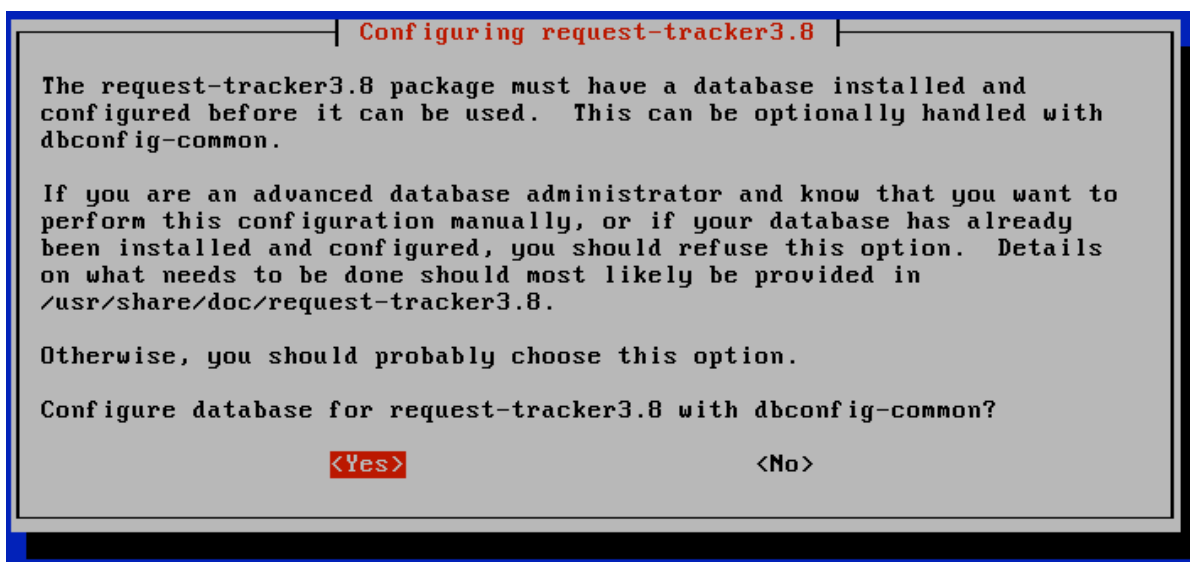
You will now be presented with several windows. Read the following instructions to see how to respond:



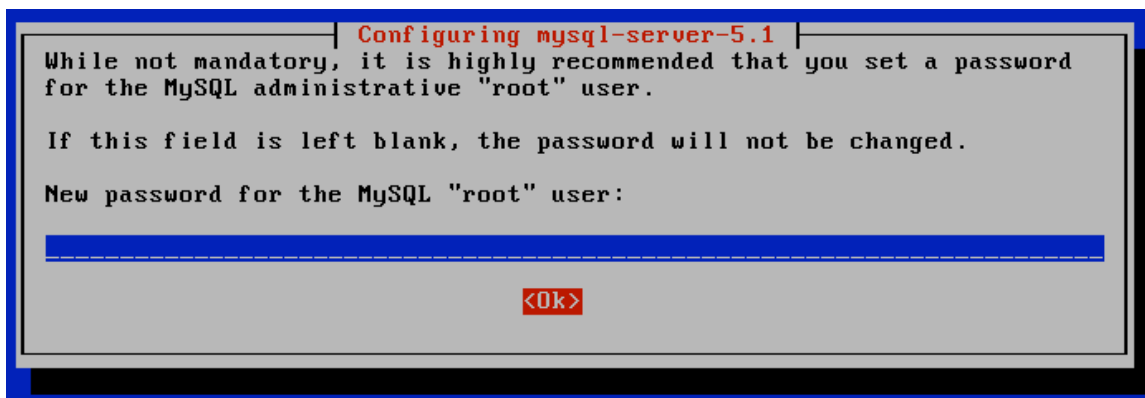
Use the name "netmgmt" for this instance of RT. (Do not use your machine name)



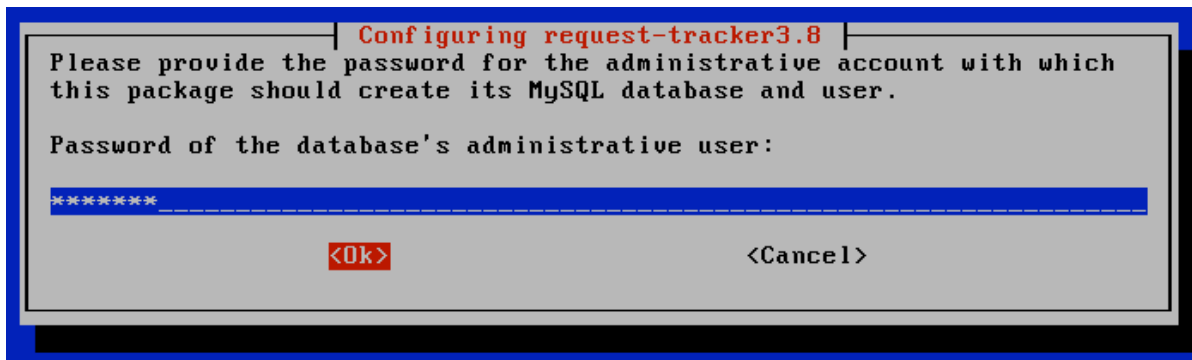
Choose “Yes” – Be aware of this issue. You may wish to manually go and change the permissions for the RT configuration file at a later time.



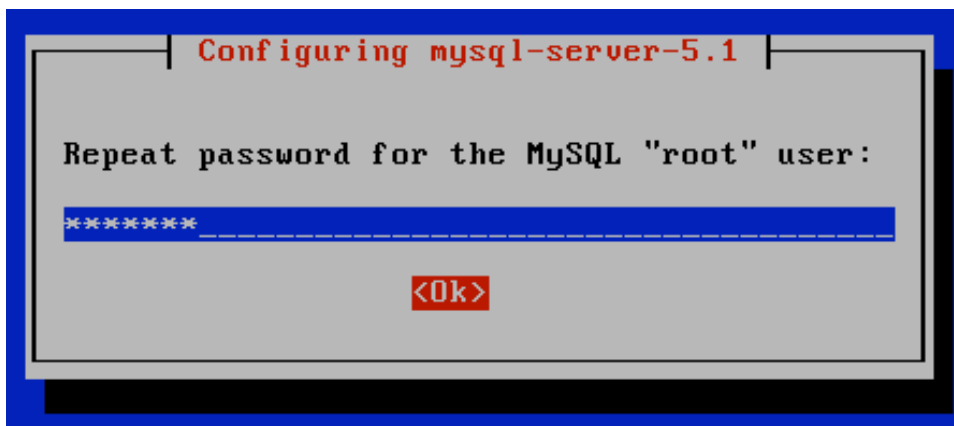
Choose “Yes”



If you see this prompt, then enter in your class password. If MySQL is already installed, then this screen will not be shown.



To keep our installation simple, please use the same password as you did for the MySQL “root” user. You will be prompted either one or two times more for the same password. Please enter it again and select “<OK>” to continue.



Enter the same password again.

At this point you have installed Request Tracker version 3.8. In order to access RT via the Apache web server you need to make one small change.

```
$ cd /etc/apache2/conf.d
$ sudo ln -s /etc/request-tracker3.8/apache2-speedycgi.conf .
$ sudo service apache2 reload
```

RT is now running and available on your machine.

Exercise 2

RT Configuration: root User Password Change

Open a web browser and point it to the IP address of the machine where you installed RT.

For example open the link (trailing “/” is *required*):

<http://pcN.ws.nsrc.org/rt/>

You will now see the opening RT screen. You should log in using the default username and password for a new installation.

Login as user “root” and password of “password”

Once you have logged in let's update the password for the root RT user. To do this click on **Configuration** in the left menu, then click on the **Users** entry.

Once you've clicked on **Users** you should see a screen like the one below:

RT for aroc Logged in as root | Preferences | Logout

Select a user New ticket in General Search...

Select · Create

Privileged users

Select a user:

#	Name	RealName	EmailAddress
12	root	Enoch Root	root@localhost

(Download as a tab-delimited file)

Find all users whose User Id matches

☐ Include disabled users in search.

Go!

Click on the **root** entry and you will now see a detail screen for this user:

RT for aroc Logged in as root | Preferences | Logout

Modify the user root

Basics · History · Memberships · RT at a glance

New ticket in General Search...

Identity

Username: root (required)

Email: root@localhost

Real Name: Enoch Root

Nickname:

Unix login: root

Language: --

Extra info:

Location

Organization:

Address1:

Address2:

City:

State:

Zip:

Country:

Phone numbers

Home:

Work:

Mobile:

Pager:

Access control

☒ Let this user access RT

☒ Let this user be granted rights

New Password:

Retype Password:

Custom Fields

Change the password for the root user to the administrative password that you are using in class. Once you have done this press the **Save Changes** button at the bottom of the screen (not visible in our screen capture). You'll see this at the top of the page if all goes well:

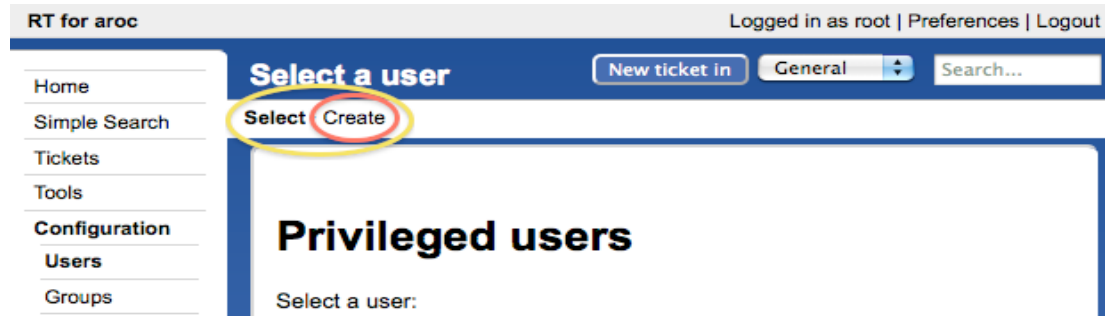
Results

- Password changed

Exercise 3

RT Configuration: Create a User

You should already be logged in to RT as the “root” user. If not, log back in as root.



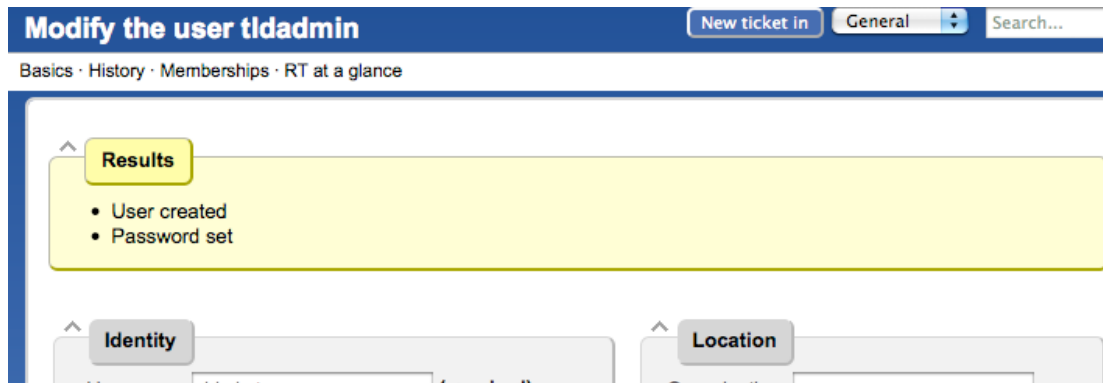
On the left of the screen click **Configuration** → **Users** and then click on the **Create** item in the upper-left of the screen.

You will now be presented with the following dialogue. Fill in the fields, and make sure the checkbox "Let this user be granted rights" is checked.

The screenshot shows the "Create a new user" form in RT. At the top, it says "Create a new user" and "New ticket in", "General", and "Search...". Below this is a navigation bar with "Select" and "Create" (circled in yellow). The form is divided into several sections: "Identity" (Username: sysadm (required), Email: sysadm@localhost, Real Name: System Admin, Nickname: , Unix login: , Language: -), "Location" (Organization: , Address1: , Address2: , City: , State: , Zip: , Country:), "Access control" (Let this user access RT: checked, Let this user be granted rights: checked and circled in red, New Password: , Retype Password:), and "Phone numbers" (Home: , Work: , Mobile: , Pager:). There is also a "Custom Fields" section at the bottom.

Use the same password for “sysadm” as you are using in class. **Be sure you check “Let this user be granted rights”**. Once done, scroll down the page and click on the **Create** button (bottom right).

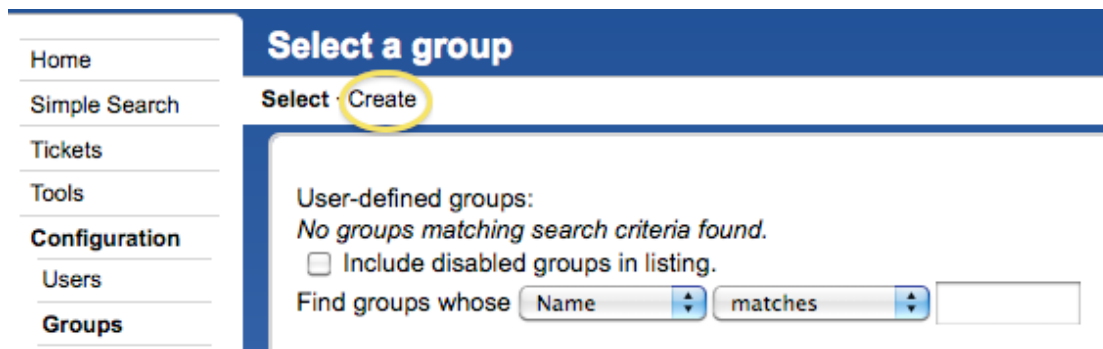
You should see this:



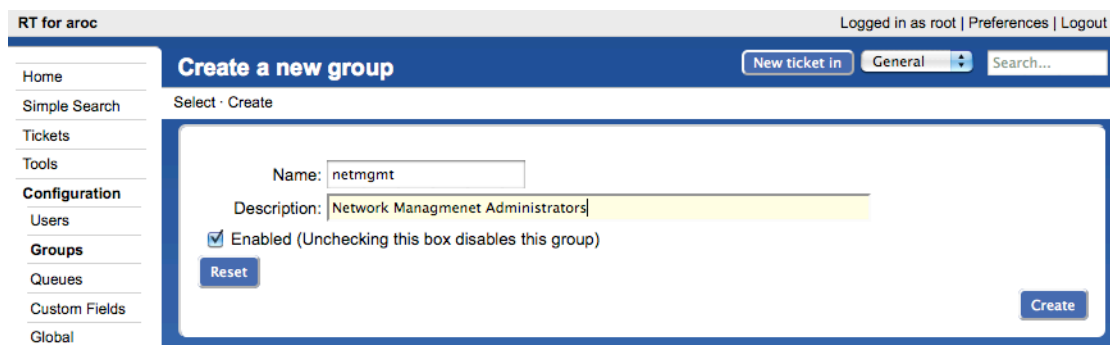
Exercise 4

RT Configuration: Create a Group

1. Click on **Configuration** (left menu), then **Groups** (middle of screen).
2. Click on **Create** (top menu)



3. Fill in the name: "**netmgmt**", and add a description, then click on "**Create**"



You should see the following result (next page):

RT for aroc Logged in as root | Preferences | Logout

- Home
- Simple Search
- Tickets
- Tools
- Configuration
- Users
- Groups
- Select
- Create
- netmgmt**
- Queues
- Custom Fields
- Global
- Tools

Modify the group netmgmt

Basics · Members · Group Rights · User Rights · History
New ticket in
General
Search...

Results

- Group netmgmt: Description changed from (no value) to 'Network Managemenet Administrators' by root

Name:

Description:

☒ Enabled (Unchecking this box disables this group)

Reset
Save Changes

Exercise 5

RT Configuration: Add Members to a Group

4. Click on **Configuration** (left menu), then **Groups** (center menu)
5. Click on "netmgmt" (the group you just created)
6. Click on **Members** (top menu)

RT for aroc Logged in as root | Preferences | Logout

- Home
- Simple Search
- Tickets
- Tools
- Configuration
- Users
- Groups
- Select
- Create
- netmgmt**

Modify the group netmgmt

Basics · **Members** · Group Rights · User Rights · History
New ticket in
General
Search...

Name:

Description:

☒ Enabled (Unchecking this box disables this group)

Reset
Save Changes

7. In the "Add members" list (right), select the user you created in step 3. This is the "sysadm" user, with the description "System Admin."

RT/Admin/Edit the group netmgmt New ticket in General Search...

Basics · **Members** · Group Rights · User Rights · History

Editing membership for group netmgmt

Current members

(No members)

Add members

Users

Enoch Root

System Admin

Groups

(Check box to delete)

Reset
Modify Members

You should see this:

Results

- Member added: sysadm

Exercise 6

RT Configuration: Create a New Queue

1. Click on **Configuration** (left menu), then **Queues** (center menu)
2. Click on **Create** (top menu)

The screenshot shows the RT Admin interface for 'aroc'. The top bar indicates 'Logged in as root | Preferences | Logout'. The left sidebar contains a navigation menu with 'Configuration' selected. The main content area is titled 'Admin queues' and has a 'Create' button highlighted with a yellow circle. Below this, the 'Enabled Queues' section shows a table with one queue: 'General' (The default queue, Address: -/-, Priority: 0-0, DefaultDuelIn: 0, Status: Enabled). A 'Go!' button is at the bottom right.

1. Fill in the fields. Let's use the following values:
Queue Name: net
Description: Network Problems
Subject Tag: Request Tracker: NET
Reply Address: net@localhost
Comment Address: net-comment@localhost

The screenshot shows the 'Editing Configuration for queue net' page. The top bar indicates 'Logged in as root | Preferences | Logout'. The left sidebar shows 'Queues' selected. The main content area has a 'Create' button highlighted with a yellow circle. The form contains the following fields and values:

Field	Value
Queue Name	net
Description	Network Problems
Subject Tag	Request Tracker: NET
Reply Address	net@localhost
Comment Address	net-comment@localhost
Priority starts at	0
Over time, priority moves toward	0
Requests should be due in	0 days
Enabled	<input checked="" type="checkbox"/>

2. Click on **Create**:

Results

- Queue created
- Queue net: Description changed from (no value) to "Network Problems"
- Queue net: CorrespondAddress changed from (no value) to "net@localhost"
- Queue net: CommentAddress changed from (no value) to "net-comment@localhost"
- Queue net: SubjectTag changed to [RT NET]

If your Request Tracker box has a fully qualified domain name you can use this instead of "localhost".

Exercise 7

RT Configuration: Give Rights to our Group on the Queue

1. Click on **Configuration** (left menu), then **Queues** (center menu).
2. Click on "**net**" (the queue that you just created).
3. Click on "**Group Rights**" (top menu).

The screenshot shows the 'Editing Configuration for queue' page in Request Tracker. The left sidebar contains a menu with 'Configuration' selected, and 'Queues' is highlighted. The main content area shows the configuration for the 'net' queue. The 'Group Rights' tab is selected and circled in yellow. The configuration fields include: Queue Name (net), Description (Network Problems), Subject Tag ([RT NET]), Reply Address (net@localhost), Comment Address (net-comment@localhost), Priority starts at (0), Over time, priority moves toward (0), Requests should be due in (0) days, and a checkbox for 'Enabled' which is checked. A 'Save Changes' button is at the bottom right.

The following menu is pretty long and complex. Here is what you should do:

In the "Everyone" Group, on the right side under **New Rights** select these three items. Use the CTRL key (or Apple key on a Macintosh) to select multiple items:

- **CreateTicket**
- **ReplyToTicket**
- **SeeQueue**
- **ShowTicket**

In the **netmgmt** Group select everything except for the choice "no value" – You can use the shift key to do this. Once this is done, press the **Modify Groups Rights** button on the bottom right of the page.

System groups

Everyone

Current rights	New rights
(Check box to revoke right) <input type="checkbox"/> CreateTicket <input type="checkbox"/> ReplyToTicket <input type="checkbox"/> SeeQueue <input type="checkbox"/> ShowTicket	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Unprivileged

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Privileged

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Roles

Requestor

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Owner

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Cc

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

AdminCc

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

User defined groups

netmgmt

Current rights	New rights
No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

[Reset](#)

[Modify Group Rights](#)

You will see a bunch of this (next page):

Results

- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted
- Right Granted

and all the rights that the Group “netmgmt” now has on the NET queue (bottom of page):

User defined groups

netmgmt

Current rights	New rights
(Check box to revoke right)	(no value)
<input type="checkbox"/> AdminQueue	
<input type="checkbox"/> AssignCustomFields	
<input type="checkbox"/> CommentOnTicket	
<input type="checkbox"/> CreateTicket	
<input type="checkbox"/> DeleteTicket	
<input type="checkbox"/> ForwardMessage	
<input type="checkbox"/> ModifyACL	
<input type="checkbox"/> ModifyCustomField	
<input type="checkbox"/> ModifyQueueWatchers	
<input type="checkbox"/> ModifyScripts	
<input type="checkbox"/> ModifyTemplate	
<input type="checkbox"/> ModifyTicket	
<input type="checkbox"/> OwnTicket	
<input type="checkbox"/> ReplyToTicket	
<input type="checkbox"/> SeeCustomField	
<input type="checkbox"/> SeeQueue	
<input type="checkbox"/> ShowACL	
<input type="checkbox"/> ShowOutgoingEmail	
<input type="checkbox"/> ShowScripts	
<input type="checkbox"/> ShowTemplate	
<input type="checkbox"/> ShowTicket	
<input type="checkbox"/> ShowTicketComments	
<input type="checkbox"/> StealTicket	
<input type="checkbox"/> TakeTicket	
<input type="checkbox"/> Watch	
<input type="checkbox"/> WatchAsAdminCc	

Exercise 8

RT Configuration: Log in as sysadm

Log out of RT and log back in as the sysadm user you have created.

Logged in as root | Preferences | Logout

New ticket in General Search...

Transaction Custom Fields · Group Rights · User Rights ·

RT for aroc Not logged in.

Login 3.8.4

Username: sysadm

Password:

Login

You should see this:

RT for aroc Logged in as sysadm | Logout

Home Simple Search Tickets Tools Approval

RT at a glance Home

New ticket in net Search...

10 highest priority tickets I own Edit

10 newest unowned tickets Edit

Bookmarked Tickets Edit

Quick ticket creation

Reminders

Quick search Edit

Queue	new	open	stalled
net	0	0	0

Dashboards Edit

At this point RT has been properly configured for initial operation. Now we must configure email properly to talk with our new “net” queue in RT.

Exercise 9

RT Configuration: Email

RT will work with the MTA (Mail Transfer Agent) of your choice. In our case we are using Postfix configured to run as an MTA for an “Internet Site” – that is, to deliver email locally and remotely using SMTP.

Edit the file `/etc/aliases`

Add the following two lines at the end of the file (copy and paste!):

```
net-comment: "|/usr/bin/rt-mailgate --queue net --action comment --url http://localhost/rt/"
net:        "|/usr/bin/rt-mailgate --queue net --action correspond --url http://localhost/rt/"
```

Save the file and exit, then run the command:

```
$ sudo newaliases
```

Exercise 10

RT Configuration: Create an Email and Tickets

Let's create an email and send it to the RT “net” queue. Do this as the sysadm user (not as root!):

If root:

```
# su - sysadm
```

```
$ echo "Problem with my router" | mail -s "Router problem" net@localhost
```

Now check that you have received email:

```
$ mutt
```

You should see an email from Request Tracker acknowledging that your ticket has been created. If you do not take these steps, and then send the mail again:

```
$ sudo touch /var/mail/sysadm
```

```
$ sudo chown sysadm:mail /var/mail/sysadm
```

Exercise 11

RT Configuration: View, Reply, Resolve, Reopen Tickets in Request Tracker

Go back to your web browser where you are logged in to RT as the sysadm user and click on the ticket in the main view page (what you see when you first log in):

RT at a glance

Home

Simple Search

Tickets

Tools

Approval

10 highest priority tickets I own

10 newest unowned tickets

#	Subject	Queue	Status	Created	
2	Problem with router	net	new	3 min ago	Take

Reminders

Quick search

Queue	new	open	stalled
net	1	0	0

You will see a bunch of information about the ticket. Scroll to the bottom of the page. Here you can **Reply** to the ticket:

History

Brief headers — Full headers

Thu Apr 22 18:45:52 2010 tldadmin@ubuntu.localdomain - Ticket created

Subject: Router problem

To: net@localhost

Date: Thu, 22 Apr 2010 18:45:49 -0700 (PDT)

From: tldadmin@ubuntu.localdomain (AROC Class User)

Problem with my router

Download (untitled) / with headers
text/plain 23b

Thu Apr 22 18:45:53 2010 RT_System - Outgoing email recorded

Show

Reply Comment Forward

Go ahead and type in a reply, set the **Status** of the ticket to **Resolved** (upper-right drop-down menu), and then click on **Update Ticket** (bottom-right):

Update ticket #1 (Router problem)

New ticket in net Search...

Display · History · Basics · Dates · People · Links · Reminders · Jumbo

Open · Take · Comment · Reply · Resolve · ☆

Status: resolved Owner: Nobody (Unchanged) Worked: Minutes

Update Type: Reply to requestors

Subject: Router problem

One-time Cc:

One-time Bcc:

Attach: Browse... Add More Files

Message:

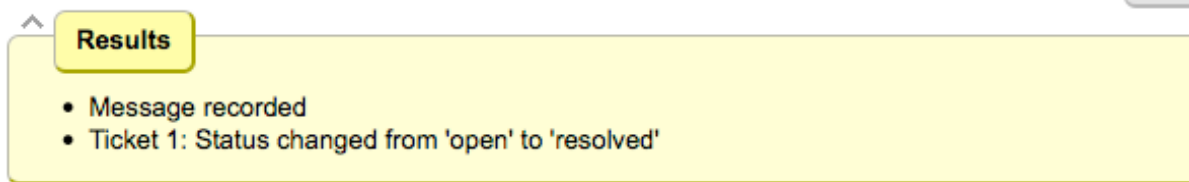
On Thu Apr 22 18:45:52 2010, tldadmin@ubuntu.localdomain wrote:
> Problem with my router

It's fixed!

Your friendly network administrator.

Update Ticket

You should see this

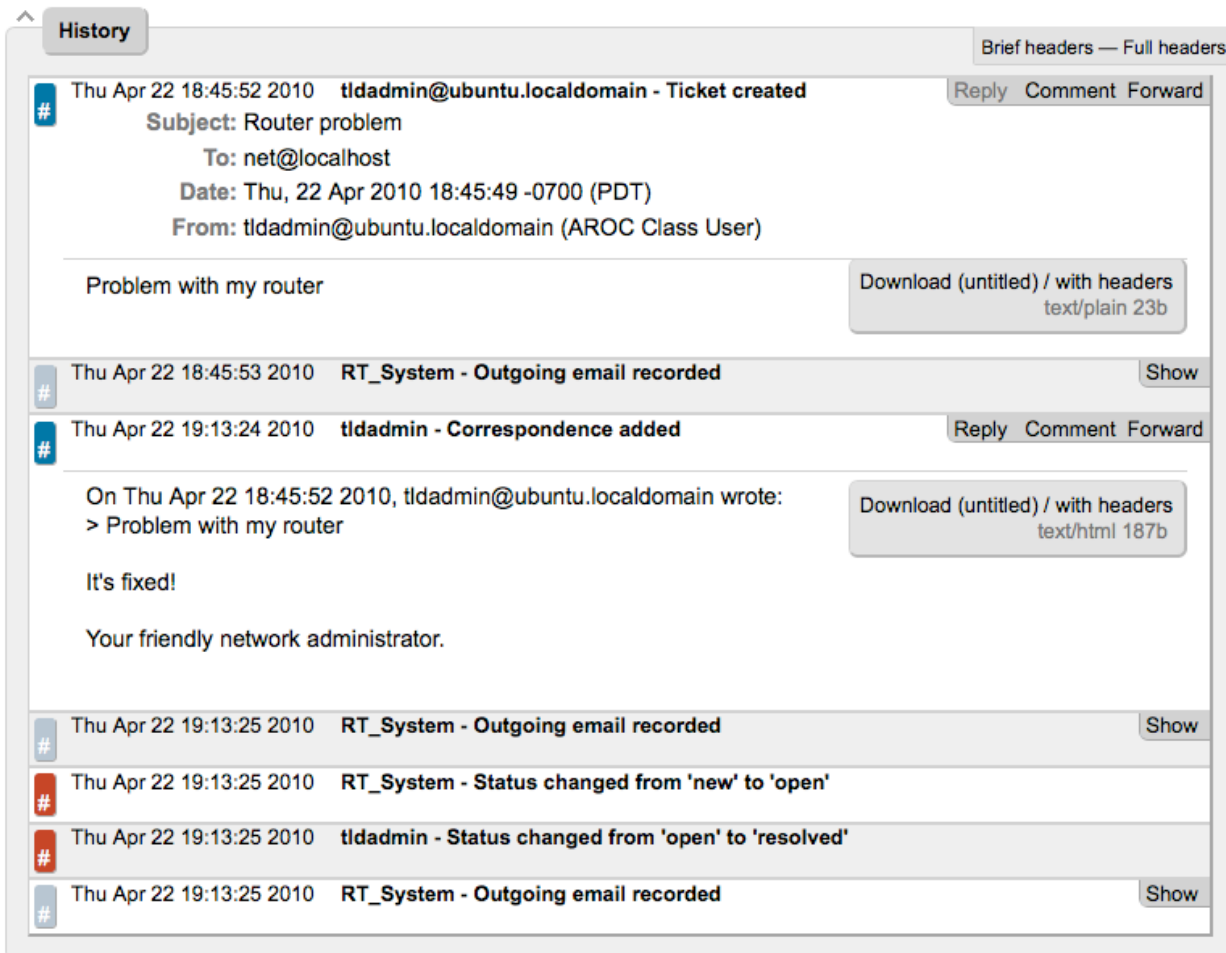


Results

- Message recorded
- Ticket 1: Status changed from 'open' to 'resolved'

The ticket is currently “Resolved,” but you can either reopen the ticket via the RT web interface at any time, or if the original ticket creator (sysadm in this case) replies to the email you just sent, then the ticket will be reopened.

View the history at the bottom of the page to see that the ticket is currently closed:



History Brief headers — Full headers

Thu Apr 22 18:45:52 2010 tldadmin@ubuntu.localdomain - Ticket created Reply Comment Forward

Subject: Router problem
To: net@localhost
Date: Thu, 22 Apr 2010 18:45:49 -0700 (PDT)
From: tldadmin@ubuntu.localdomain (AROC Class User)

Problem with my router Download (untitled) / with headers text/plain 23b

Thu Apr 22 18:45:53 2010 RT_System - Outgoing email recorded Show

Thu Apr 22 19:13:24 2010 tldadmin - Correspondence added Reply Comment Forward

On Thu Apr 22 18:45:52 2010, tldadmin@ubuntu.localdomain wrote:
> Problem with my router Download (untitled) / with headers text/html 187b

It's fixed!

Your friendly network administrator.

Thu Apr 22 19:13:25 2010 RT_System - Outgoing email recorded Show

Thu Apr 22 19:13:25 2010 RT_System - Status changed from 'new' to 'open'

Thu Apr 22 19:13:25 2010 tldadmin - Status changed from 'open' to 'resolved'

Thu Apr 22 19:13:25 2010 RT_System - Outgoing email recorded Show

If you went back to your terminal session as the sysadm user and typed:

```
$ mutt -f /var/mail/sysadm
```

and responded to the email generated from Request Tracker, then your ticket status will change. You can see this by reloading the RT web page for the ticket and viewing the history at the bottom of the page:

Thu Apr 22 19:17:33 2010 tldadmin@ubuntu.localdomain - Correspondence added Reply Comment Forward

Subject: Re: [Request Tracker: NET #1] Resolved: Router problem
Date: Thu, 22 Apr 2010 19:17:33 -0700
To: AROC Admin Account via RT <net@localhost>
From: AROC Class User <tldadmin@ubuntu.localdomain>

On Thu, Apr 22, 2010 at 07:13:25PM -0700, AROC Admin Account via RT wrote:
 > According to our records, your request has been resolved. If you have any
 > further questions or concerns, please respond to this message.

It's still wedged! Can you come out and have a look?

Sincerely,

Your ever-patient customer

Download (untitled) / with headers
 text/plain 310b

Thu Apr 22 19:17:33 2010 **RT_System - Status changed from 'resolved' to 'open'**

You now have a functioning RT instance with email integration. A bit later we will extend the use of RT by integrating it with other Network Monitoring software using the `rt-mailgate` facility that we have already configured in the `/etc/aliases` file.

Exercise 12

Finding a ticket once it's closed.

After a ticket has been resolved or closed may notice that it disappears from your Queue. Actually finding a closed ticket requires a few steps. First, click on Tickets and you will see a screen like this:

Query Builder

New ticket in
net
Search...

New Search · Edit Search · Advanced

Add Criteria

id
less than

Subject
matches

Queue
is

Status
is

Owner
is

Requestor E
matches

Created
before
Calendar

Time Worked
less than
Minut

Priority
less than

HasMember
is

Aggregator
☒ AND
☐ OR

Add these terms

Add these terms and Search

Current search

↑
↓
←
→

And/Or
Delete

If you are going to search for items in a queue and there are already items in the “Current search” box, then you should delete the items from the “Current search” box first. Next in the “Add Criteria” box in the “Queue” choice select the “net” queue from the drop-down menu (see below):

The screenshot shows the 'Query Builder' interface. At the top, there is a header bar with 'New ticket in' and a dropdown menu showing 'net'. To the right is a 'Search...' button. Below the header, there is a navigation bar with links: 'New Search', 'Edit Search', 'Advanced', 'Show Results', 'Bulk Update', and 'Graph'. The main area contains two panels. The 'Add Criteria' panel on the left has a list of criteria: 'id' (less than), 'Subject' (matches), 'Queue' (is, net), 'Status' (is, -), 'Owner' (is, -), 'Requestor E' (matches), 'Created' (before, Calendar), 'Time Worke' (less than, Minut), 'Priority' (less than), and 'HasMember' (is). The 'Queue' criterion is highlighted with a yellow circle. Below the criteria list is an 'Aggregator' section with 'AND' and 'OR' radio buttons. The 'Current search' panel on the right shows 'Queue = 'net'' and is also highlighted with a yellow circle. Below these panels are two buttons: 'Add these terms' and 'Add these terms and Search', both highlighted with a red circle.

Click on “Add these terms” or “Add these terms and Search” – If you just do “Add these terms” then go to the bottom of the page and click on “Update format and Search” – RT will keep the search terms until you delete them at a later time.

The screenshot shows the 'Display Columns' panel. It has three sections: 'Add Columns:', 'Format:', and 'Show Columns:'. The 'Add Columns:' section has a list of columns: 'id', 'QueueName', 'Subject', 'Status', 'ExtendedStatus', and 'UpdateStatus'. The 'Format:' section has fields for 'Link:', 'Title:', 'Size:', and 'Style:'. The 'Show Columns:' section has a list of columns: 'id', 'Subject', 'Status', and 'QueueName'. Below the 'Show Columns:' list are 'up', 'down', and 'Delete' buttons. At the bottom right of the panel is a button labeled 'Update format and Search', which is highlighted with a red circle.

And the results of your search will look something like this and you will be able to view tickets that have been closed, resolved, etc.:

Found 2 tickets

[New ticket in](#)

net

[New Search](#) · [Edit Search](#) · [Advanced](#) · **[Show Results](#)** · [Bulk Update](#) · [Graph](#)[Spreadsheet](#) · [RSS](#) · [iCal](#) · [Editable text](#)

#	Subject Requestors	Status Created	Queue Told	Owner Last Updated	Priority Time Left
1	Router problem sysadm@noc.ws.nsrc.org	resolved 33 min ago	net 29 min ago	Nobody 29 min ago	0
2	Router problem sysadm@noc.ws.nsrc.org	resolved 28 min ago	net 26 min ago	Nobody 26 min ago	0

[Change](#)

bar

chart by

Status

[Go](#)