

# 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 *tladmain* user.

### Exercise 1

Install the necessary packages for RT.

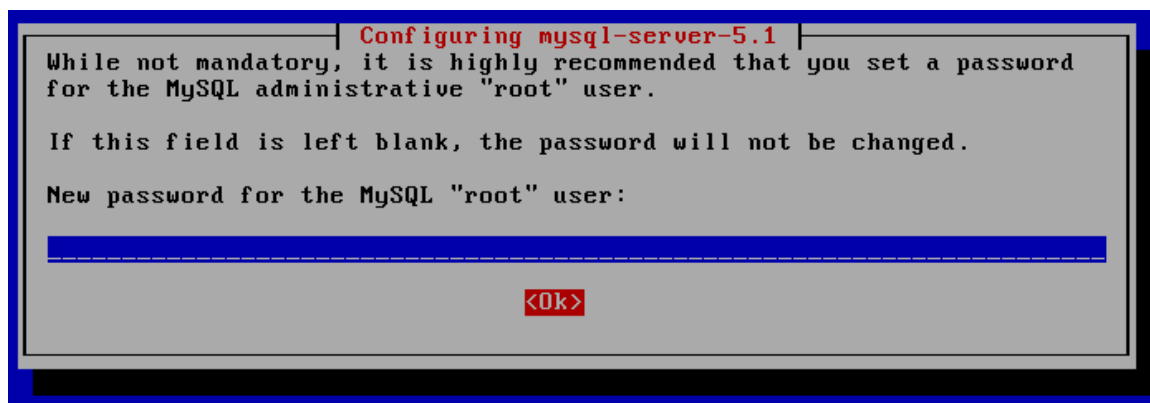
```
$ sudo apt-get install mysql-server-5.1
$ sudo apt-get install rt3.8-apache2
$ sudo apt-get install rt3.8-clients
$ sudo apt-get install rt3.8-db-mysql
$ sudo apt-get install request-tracker3.8
$ sudo apt-get install mutt
```

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

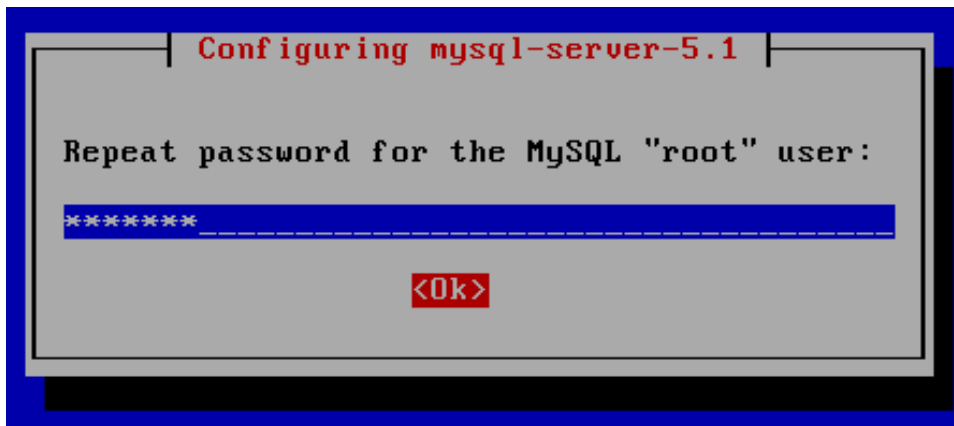
```
$ sudo apt-get install mysql-server-5.1 rt3.8-apache2 \
rt3.8-clients rt3.8-db-mysql request-tracker3.8 mutt
```

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

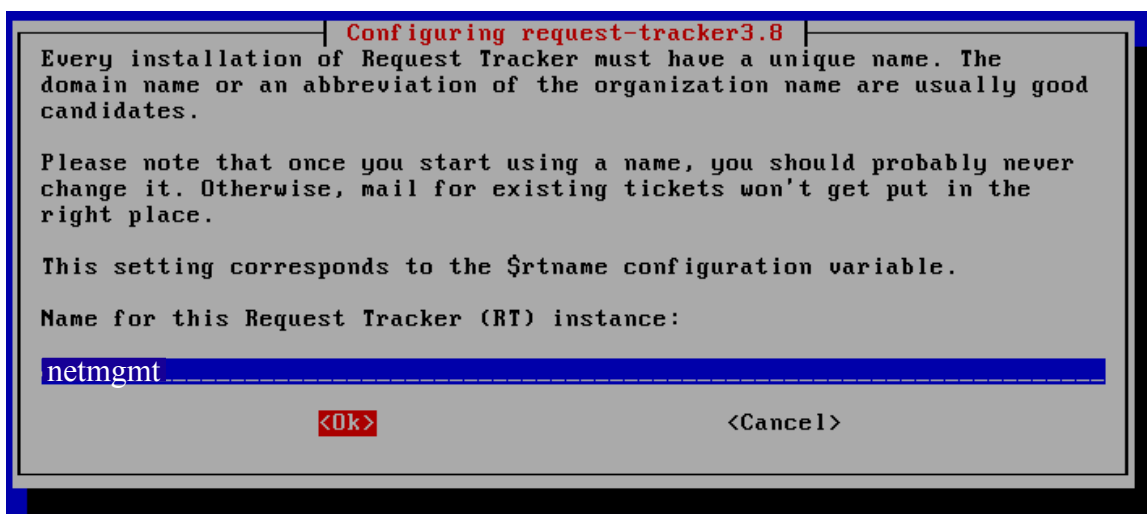
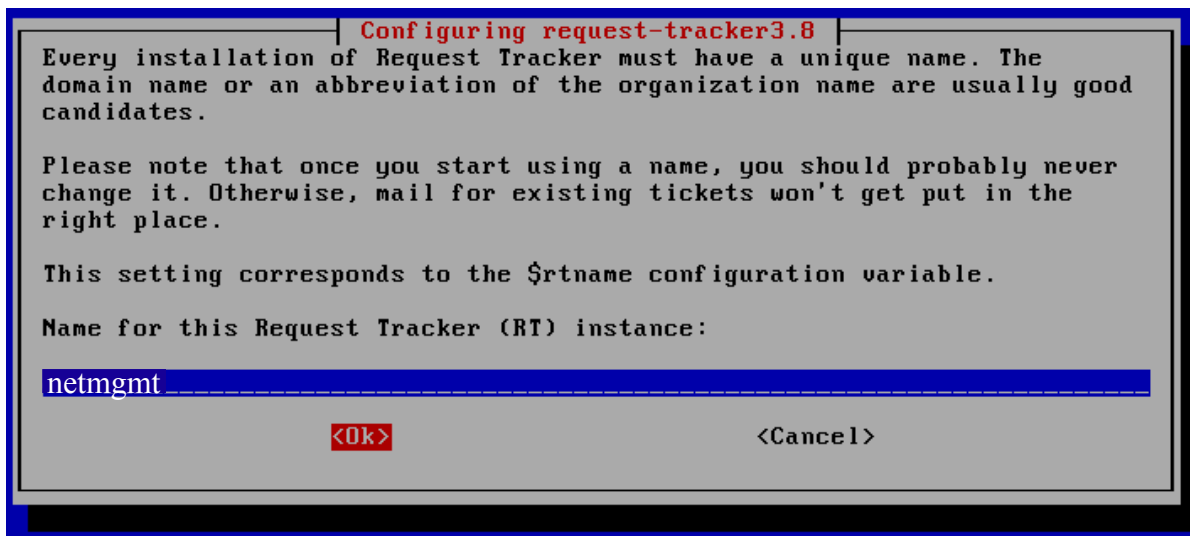
You will now be presented with several windows. Read the instructions below each item to see how to respond:



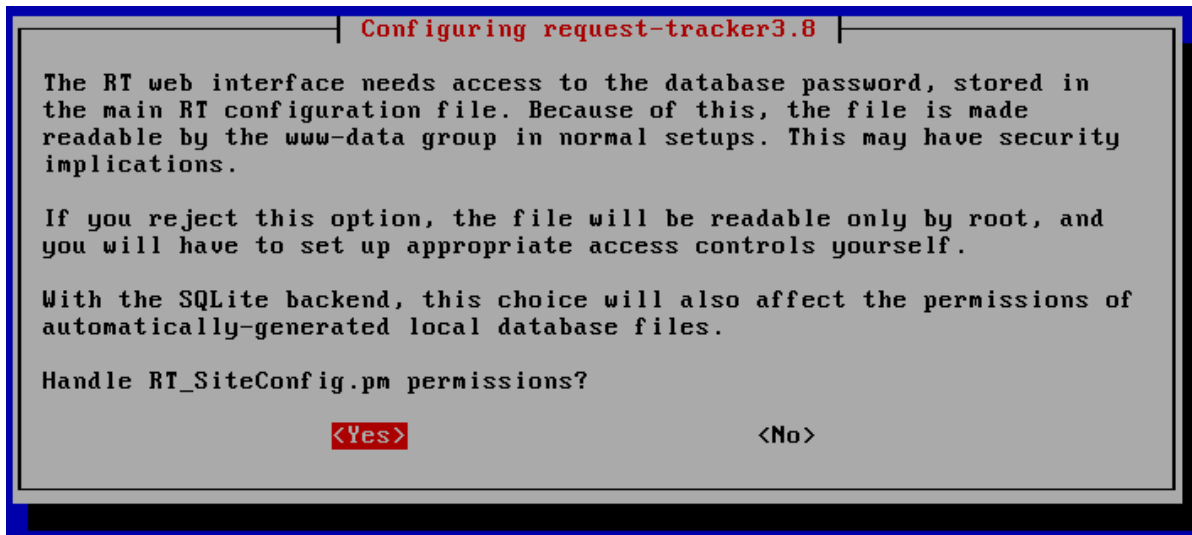
If you enter nothing, then you will receive this prompt again. Please use the administrative password you have been given in class for your machine. If you do not know what this is, then ask your instructor.



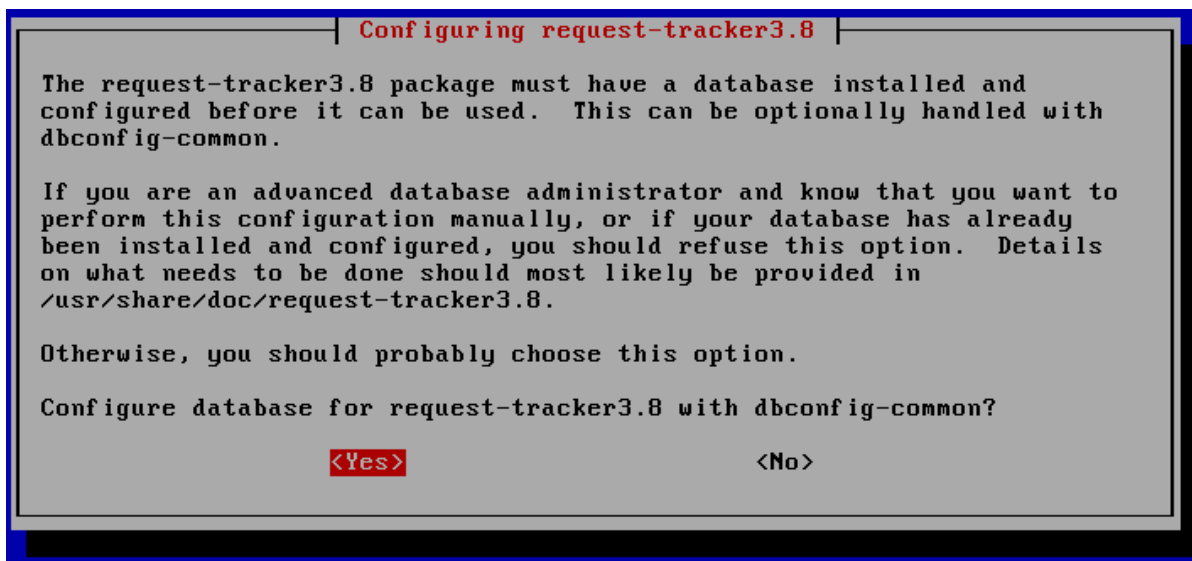
Enter the same password again.



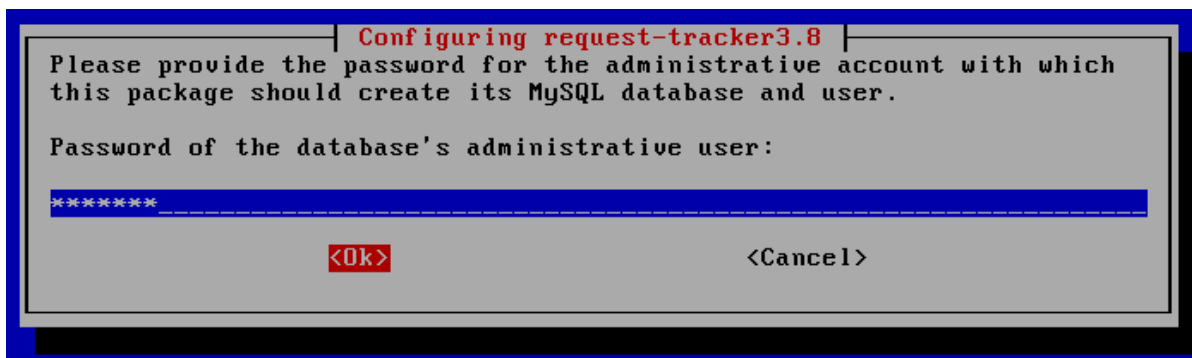
Use the name “netmgmt” for this instance of RT.



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”



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.

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 /etc/init.d/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:

<http://MyMachine/rt/>

You will now see the opening RT screen. You should log in using the default username and password for a new installation. These are “root” and “password” -

RT for aroc Not logged in.

**Login** 3.8.4

Username:

Password:

Login

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»|« RT 3.8.4 Copyright 1996-2009 Best Practical Solutions, LLC.

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To inquire about support, training, custom development or licensing, please contact [sales@bestpractical.com](mailto:sales@bestpractical.com).

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.

RT for aroc Logged in as root | Preferences | Logout

**RT Administration** New ticket in General Search...

Users · Groups · Queues · Custom Fields · Global · Tools

Home  
Simple Search  
Tickets  
Tools  
**Configuration**  
Preferences  
Approval

**Users**  
Manage users and passwords

**Groups**  
Manage groups and group membership

**Queues**  
Manage queues and queue-specific properties

**Custom Fields**  
Manage custom fields and custom field values

**Global**  
Manage properties and configuration which apply to all queues

**Tools**  
Use other RT administrative tools

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

Home  
Simple Search  
Tickets  
Tools  
**Configuration**  
**Users**  
Groups  
Queues  
Custom Fields  
Global  
Tools  
Preferences  
Approval

**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 New ticket in General Search...

Home Simple Search Tickets Tools Configuration Users Select Create root Groups Queues Custom Fields Global Tools Preferences Approval

Basics · History · Memberships · RT at a glance

**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:

**Access control**

☒ Let this user access RT  
☒ Let this user be granted rights  
 New Password:  
 Retype Password:

**Phone numbers**

Home:  
 Work:  
 Mobile:  
 Pager:

**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.

RT for aroc Logged in as root | Preferences | Logout

Select a user New ticket in General Search...

Select Create

**Privileged users**

Select a user:

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.

RT for aroc Logged in as root | Preferences | Logout

---

- Home
- Simple Search
- Tickets
- Tools
- Configuration**
- Users
- Groups
- Queues
- Custom Fields
- Global
- Tools
- Preferences
- Approval

**Create a new user**
New ticket in General Search...

Select · Create

**Identity**

Username:  (required)

Email:

Real Name:

Nickname:

Unix login:

Language: English

Extra info:

**Location**

Organization:

Address1:

Address2:

City:

State:

Zip:

Country:

**Access control**

☒ Let this user access RT

☒ Let this user be granted rights

New Password:

Retype Password:

**Phone numbers**

Home:

Work:

Mobile:

Pager:

Use the same password for “sysadmin” as you are using in class. Once done, scroll down the page and click on the **Create** button (bottom right). You should see this:

**Modify the user tldadmin** New ticket in General Search...

---

Basics · History · Memberships · RT at a glance

**Results**

- User created
- Password set

**Identity**

**Location**

## Exercise 4

### RT Configuration: Create a Group

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

Home  
Simple Search  
Tickets  
Tools  
Configuration  
Users  
Groups

## Select a group

Select · Create

User-defined groups:  
No groups matching search criteria found.

☐ Include disabled groups in listing.

Find groups whose  matches

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

RT for aroc Logged in as root | Preferences | Logout

## Create a new group

New ticket in General Search...

Select · Create

Name:

Description:

☒ Enabled (Unchecking this box disables this group)

RT for aroc Logged in as root | Preferences | Logout

## Modify the group netmgmt

New ticket in General Search...

Basics · Members · Group Rights · User Rights · History

Results

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

Name:

Description:

☒ Enabled (Unchecking this box disables this group)

## 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**
New ticket in General Search...

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

Name:   
Description:   
☒ Enabled (Unchecking this box disables this group)

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

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
- Preferences
- Approval

**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**

Sys Admin

Enoch Root

**Groups**

(Check box to delete)

Results

- Member added: sysadmin

## Exercise 6

## RT Configuration: Create a New Queue

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

RT for aroc Logged in as root | Preferences | Logout

Home Simple Search Tickets Tools Configuration Users Groups **Queues** Custom Fields Global Tools Preferences Approval

**Admin queues** New ticket in General Search...

Select **Create**

### Enabled Queues

Select a queue:

#	Name	Description	Address	Priority	DefaultDueln	
1	General	The default queue	-/-	0-0	0	Enabled

☐ Include disabled queues in listing.

Go!

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

RT for aroc Logged in as root | Preferences | Logout

Home Simple Search Tickets Tools Configuration Users Groups **Queues** Custom Fields Global Tools Preferences Approval

**Editing Configuration for queue net** New ticket in General Search...

Basics · Watchers · Scripts · Templates · Ticket Custom Fields · Transaction Custom Fields · Group Rights · User Rights · History

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 (Unchecking this box disables this queue)

Create

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).

RT for aroc Logged in as root | Preferences | Logout

Editing Configuration for queue New ticket in General Search...

Basics · Watchers · Scripts · Templates · Ticket Custom Fields · Transaction Custom Fields · **Group Rights** · User Rights · History

Queue Name: net

Description: Network Problems

Subject Tag: [RT NET]

Reply Address: net@localhost (If left blank, will default to rt@ubuntu.localdomain)

Comment Address: net-comment@localhost (If left blank, will default to rt-comment@ubuntu.localdomain)

Priority starts at: 0

Over time, priority moves toward: 0

Requests should be due in: 0 days.

☒ Enabled (Unchecking this box disables this queue)

Save Changes

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

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

Unprivileged

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

Privileged

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

Everyone

### Current rights

No rights granted.

### New rights

OWNTicket  
ReplyToTicket  
SeeCustomField  
SeeQueue  
ShowACL  
ShowOutgoingEmail

## Roles

Requestor

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

Owner

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

Cc

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

AdminCc

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

## User defined groups

netmgmt

### Current rights

No rights granted.

### New rights

StealTicket  
TakeTicket  
Watch  
WatchAsAdminCc  
(no value)

Reset

Modify Group Rights

You will see a bunch of this:

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
- 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

(Check box to revoke right)

☐ AdminQueue
 ☐ AssignCustomFields
 ☐ CommentOnTicket
 ☐ CreateTicket
 ☐ DeleteTicket
 ☐ ForwardMessage
 ☐ ModifyACL
 ☐ ModifyCustomField
 ☐ ModifyQueueWatchers
 ☐ ModifyScripts
 ☐ ModifyTemplate
 ☐ ModifyTicket
 ☐ OwnTicket
 ☐ ReplyToTicket
 ☐ SeeCustomField
 ☐ SeeQueue
 ☐ ShowACL
 ☐ ShowOutgoingEmail
 ☐ ShowScripts
 ☐ ShowTemplate
 ☐ ShowTicket
 ☐ ShowTicketComments
 ☐ StealTicket
 ☐ TakeTicket
 ☐ Watch
 ☐ WatchAsAdminCc

New rights

(no value)

### Exercise 8

RT Configuration: Log in as sysadmin

Log out of RT and log back in as the sysadmin 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: sysadmin

Password: [masked]

Login

You should see this:

RT for aroc Logged in sysadmin | 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:

```
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 sysadmin user (not as root!):

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

Now check that you have received email:

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

You should see an email from Request Tracker acknowledging that your ticket has been created.

## **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 sysadmin user and click on the ticket in the main view page (what you see when you first log in):



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

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 (sysadmin 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 **tlldadmin@ubuntu.localdomain - Ticket created** Reply Comment Forward

**Subject:** Router problem  
**To:** net@localhost  
**Date:** Thu, 22 Apr 2010 18:45:49 -0700 (PDT)  
**From:** tlldadmin@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 **tlldadmin - Correspondence added** Reply Comment Forward

On Thu Apr 22 18:45:52 2010, tlldadmin@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 **tlldadmin - 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 sysadmin user and typed:

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

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 **tlldadmin@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 <tlldadmin@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

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.