

*Request Tracker 3.8*

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# *Request Tracker*

- Bugtracking System for Perl / CPAN
- Trouble Ticket System
  - Companies
  - Organizations
- Customers
  - Few instances dedicated to clients and organizations
  - One instance for other clients
- Best Practical

# *Request Tracker*

- Introduction
  - Basics
  - Customizations
  - Interfaces
- New Features
- Plugins
- Installation and upgrades from 3.6
- RT 4

# *Basics*

- Ticket System
    - Tasks, Projects, Times, Teamwork
  - Queues
  - Tickets
    - Transactions
    - Status
    - Dates
    - Attachments
  - Users
    - Groups, Rights
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# *Customizations*

- Custom Fields
- Scripts
- Extensions (Plugins)



# *Interfaces*

- Web
    - View and manipulate tickets
    - Convenient but not lazy
  - Email
    - Create, correspond, comment on tickets
    - Manipulate tickets through plugins
  - Commandline
    - View and manipulate tickets
  - REST
    - View and manipulate tickets with Perl scripts
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# *Playground*

URL: <http://support.linuxia.de/rt>

Login: oslo/oslo6

Queue: Nordic Perl Workshop

Email: npw@support.linuxia.de

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# CLI

## New Queue:

```
$ rt create -t queue set name='Perl-Workshop'  
# Queue 4 created.
```

## New Ticket:

```
$ rt create -t ticket set subject='Presentation  
Slides' \  
    set queue='Perl-Workshop'  
# Ticket 11 created.
```



# CLI

## Display ticket:

```
$ rt show ticket/11 -f
  id,subject,queue,requestors,owner
id: ticket/11
Subject: Presentation Slides
Queue: Perl-Workshop
Requestors: racke@linuxia.de
Owner: Nobody
```

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# *REST*

- REST via HTTP
  - Access with RT username and password
  - No RT installation required
- RT::Client::REST

# *RT 3.8 Features*

- Ticket Bookmarks
  - Dashboards
  - Richtext email
  - Email signatures and encryption
  - Charts of Ticket Relationships
  - Email digests
  - Session expiration
  - Plugins
  - Visual Style
  - Bug Fixes
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# ***Ticket Bookmarks***

- Add/remove bookmarks
  - \* at upper right corner of ticket display
- List bookmarks
  - RT at a Glance/Edit

# *Dashboards*

- Contents
  - Saved Searches
  - Saved Graphs
  - Ticket Relationship Graphs
- Location
  - Tools/Dashboards

# *Dashboard Rights I*

- Create
    - CreateDashboard, CreateGroupDashboard, CreateOwnDashboard
  - Delete
    - DeleteDashboard, DeleteGroupDashboard, DeleteOwnDashboard
  - Modify
    - ModifyDashboard, ModifyGroupDashboard, ModifyOwnDashboard
  - See
    - SeeDashboard, SeeGroupDashboard, SeeOwnDashboard
  - Subscribe
    - SubscribeDashboard
- 
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# *Dashboard Rights II*

- Saved Searches
  - CreateSavedSearch
  - ShowSavedSearch
  - LoadSavedSearch
- <http://wiki.bestpractical.com/view/Rights>

# *Richtext Email*

- WYSIWYG editor for HTML emails
  - FCKeditor
    - Excellent cross-platform support
    - Local copy in html/NoAuth/RichText
  - Just plain text
    - Set(\$MessageBoxRichText, 0);
    - Preferences/General (ModifySelf)
  - Display improvements
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# Richtext Email

The screenshot displays the Request Tracker 3.8 web interface in a browser window. The address bar shows the URL: `http://support.linuxia.de/rt/Ticket/Update.html?Action=Respond&id=1159`. The browser's toolbar includes various icons for navigation and editing. The page header shows the site name "RT for support.linuxia.de" and the user is logged in as "vienna".

The main content area is titled "Update ticket #1159 (Request Tracker 3.8)". It features a sidebar on the left with navigation links: Home, Simple Search, Tickets, New Search, Edit Search, Advanced, Show Results, Bulk Update, #1159, Tools, and Approval. The main form includes fields for Status (open (Unchanged)), Owner (bratislava (Unchanged)), Worked (Minutes), Update Type (Reply to requestors), Subject (Request Tracker 3.8), One-time Cc, and One-time Bcc. There is an "Attach" section with a "Browse..." button and an "Add More Files" button. Below these is a rich text editor with a toolbar containing various icons for text formatting and alignment. The text area contains the text: "Request Tracker is *written* in Perl, a cool and colorful language." The word "written" is italicized, and "colorful" is split into "color" (blue) and "ful" (red). A "Update Ticket" button is located at the bottom right of the form.

The footer of the page includes a search bar with the text "Find: vienn", navigation links "Previous" and "Next", and checkboxes for "Highlight all" and "Match case". The bottom status bar shows "Transferring data from support.linuxia.de..." and a "FoxTrick" icon.

# *Email Signatures and Encryption*

- verify PGP signatures on incoming messages
- decrypt encrypted messages
- sign and encrypt outgoing mail

# *Encryption: Configuration*

```
Set ( %GnuPG,  
Enable=>1,  
OutgoingMessagesFormat=>'RFC',  
AllowEncryptDataInDB=>0,  
);  
Set ( %GnuPGOptions,  
'passphrase'=>'foobar',  
'no-permission-warning'=>undef,  
'homedir'=>' /var/cache/request-  
tracker3.8/data/gpg'  
);  
Set (@MailPlugins, 'Auth::MailFrom',  
'Auth::GnuPG',  
);
```

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# *Encryption: Queues*

- Create key for correspond and comment address
- Sign by default / Encrypt by default

# *Encryption: Setup*

RT's GnuPG libraries couldn't successfully read your configured GnuPG home directory (/var/cache/request-tracker3.8/data/gpg). PGP support has been disabled

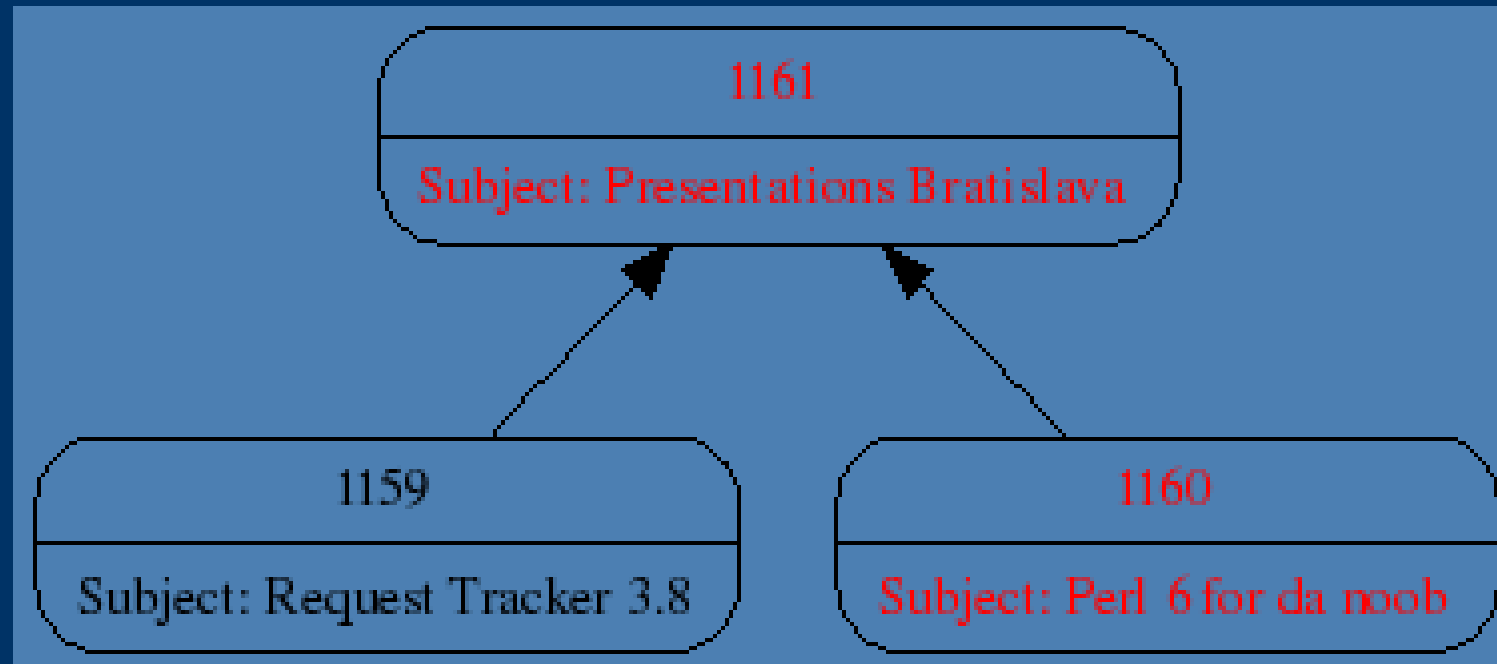
```
cd /var/cache/request-tracker3.8/  
mkdir -p data/gpg  
chown -R www-data data  
chmod -R o-rx data
```

```
su www-data  
GNUPGHOME=data/gpg gpg --gen-key
```

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# *Charts of Ticket Relationships*



# *Charts of Ticket Relationships*

- Ensure modules are installed, otherwise silent failure
- `./sbin/rt-test-dependencies`  
`--with-GD --with-GRAPHVIZ`

# *Mail Delivery / Digests*

- Preferences/Mail
    - Needs ModifySelf right
  - Delivery Options
    - Individual
    - Daily
    - Weekly
    - Suspended
  - Cronjob for Digests
- 
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# *Session Expiration*

- No expiration save by closing the browser
- Now with rt-clean-sessions

# *Plugins*

- Extensions for RT
  - Interface formalized in 3.8
- Download: CPAN
- Installation
  - Standard module installation
  - RTHOME environment variable
- Configuration: RT\_SiteConfig.pm
  - @Plugins
  - @MailPlugins

# *Plugins*

- Rtx::Calendar
    - Calendar view for tickets
  - RT::Authen::ExternalAuth
    - External lookup of authentication and information
  - RTx::EmailCompletion
    - Auto completion on email fields
  - RT::Extension::EmailByCommand
    - Manipulate tickets by email
  - RT::Extension::ExtractCustomFieldValues
    - Extract custom values from emails
- 
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# *Plugins: Installation and Configuration*

```
$ export RTHOME=/opt/rt3  
$ perl Makefile.PL  
$ make  
$ make install
```

`/opt/rt3/etc/RT_SiteConfig.pm:`

```
Set (@MailPlugins, qw (Auth::MailFrom  
Filter::TakeAction) );
```

```
Set (@Plugins,  
(qw (RT::Extension::CommandByMail) ) );
```

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# *Plugins: Portlet*

```
Set ($HomepageComponents, [qw(QuickCreate  
Quicksearch MyCalendar MyAdminQueues  
MySupportQueues MyReminders RefreshHomepage  
Dashboards)]);
```

# *Installation, Upgrade and Configuration*

- Installation
- Upgrades from RT 3.6 to RT 3.8
- Configuration

# *Installation: Debian vs RedHat*

- Debian
  - Tons of packaged Perl modules
  - Debian Perl Group
  - Perl used for many system/packaging tools
  - RT 3.8 packages missing :-(
- RedHat
  - notoriously breaking Perl (modules)
  - Scalar::Util from CPAN

# *Installation: Prerequisites*

- Perl 5.8.3
  - SQL database
    - MySQL (4.0.13 or later with InnoDB support)
    - PostgreSQL (7.2 or later)
    - Oracle (9iR2 or later)
    - SQLite (3.0 or later)
  - Webserver
    - Apache 1.3.x or 2.x
      - mod\_perl
      - FastCGI
    - Other
      - FastCGI
  - Perl modules
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# *Installation*

- Download and unpack tarball
    - <http://download.bestpractical.com/pub/rt/release/rt.tar.gz>
  - Read README
  - ./configure
    - /opt/rt3
  - make testdeps
  - make fixdeps
  - make install (as root)
  - edit configuration
    - /opt/rt3/etc/RT\_SiteConfig.pm
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# *Edit Configuration*

```
# THE BASICS:
```

```
Set($rtname, 'support.linuxia.de');  
Set($Organization, 'support.linuxia.de');
```

```
Set($CorrespondAddress ,  
'rt@support.linuxia.de');  
Set($CommentAddress ,  
'rt-comment@support.linuxia.de');
```

```
# THE WEBSERVER:
```

```
Set($WebPath , "/rt");  
Set($WebBaseURL , "http://support.linuxia.de");
```

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# *Database Configuration and Setup*

## Configuration

```
Set ($DatabaseType, 'mysql');  
Set ($DatabaseHost, 'localhost');  
Set ($DatabaseName, 'support');  
Set ($DatabaseUser , 'support');  
Set ($DatabasePassword , 'mysecret');
```

## Setup

```
make initialize-database
```

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## *Edit Configuration: Database*

```
Set ($DatabaseType, 'mysql');
```

```
Set ($DatabaseHost, 'localhost');
```

```
Set ($DatabaseUser , 'support');
```

```
Set ($DatabasePassword ,  
    'mysecret');
```



# Webserver Configuration

```
<VirtualHost 85.10.244.99:80>
    ServerName support.linuxia.de
    DocumentRoot /opt/rt3/share/html
    AddDefaultCharset UTF-8

    PerlRequire "/opt/rt3/bin/webmux.pl"

    <Location /NoAuth/images>
        SetHandler default
    </Location>
    <Location />
        SetHandler perl-script
        PerlResponseHandler RT::Mason
    </Location>
</VirtualHost>
```

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# *Installation: Finish*

- Change password for RT root user
  - Default is password
- Create
  - Queues
  - Users
  - Groups
  - Rights
  - Mail aliases

# *Email Gateway: Aliases for Queues*

```
tcpw@support.linuxia.de:  
/usr/bin/rt-mailgate --queue 'Twincity  
Perl Workshop' --action correspond --url  
http://support.linuxia.de/rt
```

```
tcpw-comment@support.linuxia.de:  
/usr/bin/rt-mailgate --queue 'Twincity  
Perl Workshop' --action comment --url  
http://support.linuxia.de/rt
```

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# *Upgrading 3.6 => 3.8: Preparations*

- Take RT offline
- Backup database
  - `mysqldump support > support.dmp`



# *Upgrading 3.6 => 3.8: MySQL*

- Apply schema upgrade
  - perl etc/upgrade/schema.mysql-4.0-4.1.pl db user pass  
> sql.queries
  - Check queries
  - mysql < sql.queries
- Consequences
  - Repeated logins
  - Corrupted attachments

# *Upgrading 3.6 => 3.8*

Update files and binaries

```
make upgrade
```

Update database

```
/opt/rt3/sbin/rt-setup-database --dba  
root --prompt-for-dba-password --action  
upgrade
```

Clear mason cache

```
rm -fr /opt/rt3/var/mason_data/obj
```

Restart webserver

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# ***Cronjobs: Mail Digest***

```
/etc/cron.daily/request-tracker3.8  
# Send daily RT emails.  
/usr/sbin/rt-email-digest -m daily
```

```
/etc/cron.weekly/request-tracker3.8  
# Send weekly RT emails  
/usr/sbin/rt-email-digest -m weekly
```

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# *Cronjobs: Mail Dashboards*

```
/etc/cron.hourly/request-tracker3.8  
# Send RT dashboard emails  
/usr/sbin/rt-email-dashboards
```

# *Request Tracker 4*

- Complete overhaul of the codebase
- Jifty web application platform
- TicketSQL extended as tsql
  - New powerful query language
- Scripts replaced by Lorzy
  - Lisp-like mini language
- Date and Time rationalization
  - DateTime suite

# Conclusion

- Use RT and report bugs
- Get slides
  - <http://www.linuxia.de/talks/npw2009/>
- Contact me
  - [racke@linuxia.de](mailto:racke@linuxia.de)
  - IRC #rt