

OTRS - Manual

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OTRS - Manual

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i used my vacation to add some spice to the documentation

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start to replace all OpenTRS to OTRS

Dedication

This manual is dedicated to the nice folks of *Cafe Lucas*(<http://www.cafe-lucas.de/>) and *Enchilada*(<http://www.enchilada.de/>) (two restaurants in Nuernberg). Thanks for the happy hour! Today we hang out mostly in Frankfurt but we still remember the good times in Nuernberg.

Table of Contents

Foreword.....	i
1. Install the biest.....	1
1.1. Installing the rpm on a SuSE Linux (the quick and easy way).....	1
1.2. Using the tar.gz file to install OTRS on any Linux/Unix platform.....	3
1.2.1. Install.....	3
1.2.2. Database.....	6
1.2.3. Webserver.....	7
2. Basics about a Trouble Ticket System.....	10
2.1. A simple example for a small Trouble Ticket System.....	10
2.2. What is a trouble ticket in the OTRS?	10
2.3. What is a ticket queue?	10
3. First steps.....	11
3.1. Login as root and create a new account	11
3.2. Login with user privilege	13
4. Ticket topics.....	15
4.1. Answer ticket via email	15
4.2. Answer ticket via phone.....	15
4.3. Zoom ticket.....	16
4.4. History of ticket	17
4.5. Add note to ticket.....	17
4.6. Close ticket.....	18
4.7. Forward ticket	18
4.8. Ticket priority	19
5. First Ticket.....	21
5.1. How can somebody write e-mails to the OTRS?	21
5.1.1. Config of fetchmail	21
5.1.2. Config of sendmail in SuSE Linux	21
6. Dispatching of incoming email.....	23
6.1. With OTRS.....	23
6.2. With procmail (for more complex dispatching).....	23
6.3. Example with procmail and a webform.....	25
7. Config File.....	26
7.1. Kernel/Config.pm - TicketHook	26
7.2. FQDN.....	26
7.3. Log	26
7.4. User Authentication	26
7.5. Max. Postmaster email.....	27
7.6. Ticket number format.....	27
7.7. Database settings.....	28
7.8. ASP (Application Service Provider) options	28
7.9. Custom Queue.....	28
7.10. Agent notification.....	29
7.11. Session management.....	29
7.12. URL login and logout settings	30
7.13. agent area default settings.....	30
8. Language translations	33
8.1. New translation files	33
9. Customize the frontend	35
9.1. The dtl syntax.....	35
9.2. Examples of dtl files.....	36
9.2.1. Motd.dtl.....	36
9.2.2. Login.dtl.....	36
9.2.3. Header.dtl.....	37
9.3. Create a new theme	38

10. Generic-Agent	39
10.1. Config File	39
10.2. Examples.....	39
10.2.1. close spam tickets	39
10.2.2. delete tickets.....	40
10.2.3. move tickets from tricky to experts.....	40
10.2.4. move escalation ticket to experts and execute CMD	41
11. Performance Tuning	42
11.1. OTRS	42
11.1.1. TicketIndexModule	42
11.1.2. TicketStorageModule	42
11.2. Database.....	42
11.3. Webserver.....	43
12. Troubleshooting.....	44
12.1. General problems with OTRS on SuSE Linux	44
12.1.1. SuSE Linux 8.0	44
12.1.2. SuSE Linux and Postfix	44
12.2. General problems with OTRS on other distributions (e.g. Redhat)	44
12.3. Problems with Apache	44
12.3.1. Internal Server Error	44
12.3.2. Error: Can't connect to database!	45
12.3.3. FreeBSD, PostgreSQL and Apache (install_driver(Pg) failed).....	45
12.4. Problems with MySQL	45
12.4.1. Check the database connect	45
12.4.2. Access denied for user: 'otrs@localhost'	45
12.4.3. Lost root password of MySQL	46
12.4.4. http://localhost/otrs/installer.pl	46
12.5. Problems - misc.....	46
12.5.1. Problems with receiving emails	46
12.5.2. Lost root password of OTRS	46
13. FAQ.....	47
A. Online resources	50
A.1. OTRS Homepage	50
A.2. Mailinglists	50
A.3. Bugtracking.....	50
B. The OTRS core team.....	52
B.1. Martin Edenhofer	52
B.2. Stefan Wintermeyer	52
B.3. Sebastian Wormser	52
C. Credits	53
D. RFC 1297	54
E. GNU Free Documentation License	55
0. PREAMBLE	55
1. APPLICABILITY AND DEFINITIONS	55
2. VERBATIM COPYING	55
3. COPYING IN QUANTITY	56
4. MODIFICATIONS	56
5. COMBINING DOCUMENTS.....	57
6. COLLECTIONS OF DOCUMENTS	57
7. AGGREGATION WITH INDEPENDENT WORKS	57
8. TRANSLATION	57
9. TERMINATION	58
10. FUTURE REVISIONS OF THIS LICENSE.....	58
How to use this License for your documents	58
Bibliography	59

List of Examples

5-1. .fetchmailrc	21
5-2. /etc/mail/virtusertable	21
6-1. .procmailrc	24
7-1. TicketHook	26
7-2. Kernel/Config.pm - FQDN	26
7-3. Kernel/Config.pm - LogModule	26
7-4. Kernel/Config.pm - AuthModule	27
7-5. Kernel/Config.pm - PostmasterMaxEmails	27
7-6. Kernel/Config.pm - TicketNumberGenerator	27
7-7. Kernel/Config.pm - Database settings	28
7-8. Kernel/Config.pm - MoveInToAllQueues	28
7-9. Kernel/Config.pm - ChangeOwnerToEveryone	28
7-10. Kernel/Config.pm - Custom Queue	29
7-11. Kernel/Config.pm - Agent notification	29
7-12. Kernel/Config.pm - Session management	29
7-13. Kernel/Config.pm - URL login and logout settings	30
7-14. Kernel/Config.pm - agent area default settings	31
8-1. Kernel/Language/de.pm - Old file	33
8-2. Kernel/Language/fr.pm - New file	34

Foreword

About this Book

This is an alpha edition of this book. This version may contain glaring inconsistencies, missing sections, and other misfeatures indicative of a work in progress. But please do not hesitate to add every found mistake in our bugtracking tool at <http://bugs.otrs.org/>.

You will find the current HTML online version of this book at <http://otrs.org/docu/> or in PDF-format at <http://otrs.org/docu/manual.pdf>.

Anyhow we are keen on your feedback. Please do not hesitate to send us an e-mail to [<feedback@otrs.org>](mailto:feedback@otrs.org)

Your OTRS core team

Chapter 1. Install the biest.

The described way of installing the otrs is tested on a newly installed system. In case you have trouble to install it on your working system please try it with a new Linux installation. Most of the installation problems are caused by messy apache configurations and forgotten mysql database passwords. So please use a fresh installation to encircle an installation problem in case it occurs.

We try to keep the installation as easy as possible. But the OTRS is a very powerfull and complex application which can not just be untared in some directory and that's it.

1.1. Installing the rpm on a SuSE Linux (the quick and easy way)

This section is a guide for installing OTRS on a SuSE Linux. We tested the SuSE Linux versions 7.3, 8.0 and 8.1. Before starting the installation have a look at <http://otrs.org/> (<http://www.otrs.org/>) and check if a newer and better version of the rpm file is available. If so please download it and use the newer documentation and the newer rpm.

Install the otrs.rpm with YaST (YaST2) or on the command line with rpm (what ever you prefer). Please be aware of the fact that OpenTRS needs some Perl-Modules which are not installed by default in a typical SuSE installation. So it might be a good idea to use YaST to install the rpm because it will handle and solve all the dependencies.

In case you prefer the command line rpm way (you have to have installed the needed modules first otherwise rpm will ask you to do so):

```
ernie:~ # rpm -ivh /tmp/otrs.rpm
otrs #####
Check OpenTRS user (/etc/passwd)... otrs added.
SetPermissions.sh <$Revision: 1.4 $> - set OpenTRS file permissions
Copyright (c) 2002 Martin Edenhofer <martin@otrs.org>
Setting file permissions...
chown -R root.root /opt/OpenTRS
chown otrs.nogroup /opt/OpenTRS
chown otrs.nogroup /opt/OpenTRS/.fetchmailrc
chmod 0710 /opt/OpenTRS/.fetchmailrc
chown otrs.nogroup /opt/OpenTRS/.procmailrc
chmod 0644 /opt/OpenTRS/.procmailrc
chown -R otrs.nogroup /opt/OpenTRS/var/
chown -R wwwrun.nogroup /opt/OpenTRS/var/sessions/
otrs.nogroup /opt/OpenTRS/var/log/TicketCounter.log
chmod -R 755 /opt/OpenTRS/bin/
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/DeleteSessionIDs.pl
chmod: getting attributes of 'otrs.root': No such file or directory
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/UnlockTickets.pl
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/otrs.getConfig
Updating etc/sysconfig/otrs...
insserv: script postfix: service sendmail already provided!
```

Next steps:

```
[SuSEconfig]
Execute 'SuSEconfig' to configure the webserver.
```

```
[start Apache and MySQL]
Execute 'rcapache start' and 'rcmysql start' in case they don't run.
```

```
[install the OpenTRS database]
Use a webbrowser and open this link:
http://localhost/otrs/installer.pl
```

```
[OpenTRS services]
Start OpenTRS 'rcotrs start-force' (rcotrs {start|stop|status|restart|start-force|stop-force}).
```

Have fun!

```
Your OpenTRS Team
http://otrs.org/
```

```
ernie:~ #
```

Know it's time to start SuSEconfig:


```

ernie:~ # SuSEconfig
Starting SuSEconfig, the SuSE Configuration Tool...
Running in full featured mode.
Reading /etc/rc.config and updating the system...
Executing /sbin/conf.d/SuSEconfig.aaa_at_first...
Executing /sbin/conf.d/SuSEconfig.alljava...
Executing /sbin/conf.d/SuSEconfig.apache...
Installing new /etc/httpd/httpd.conf
Installing new /etc/httpd/suse_include.conf
Executing /sbin/conf.d/SuSEconfig.doublecheck...
Executing /sbin/conf.d/SuSEconfig.fonts...
Executing /sbin/conf.d/SuSEconfig.groff...
Executing /sbin/conf.d/SuSEconfig.hostname...
Executing /sbin/conf.d/SuSEconfig.inittab...
Executing /sbin/conf.d/SuSEconfig.man_info...
Executing /sbin/conf.d/SuSEconfig.news...
Executing /sbin/conf.d/SuSEconfig.perl...
Executing /sbin/conf.d/SuSEconfig.permissions...
Checking permissions and ownerships - using /etc/permissions.d/postfix...
setting /usr/sbin/sendmail to root.root 0555.
Checking permissions and ownerships - using /etc/permissions.d/sendmail...
setting /usr/sbin/sendmail to root.mail 2555.
Executing /sbin/conf.d/SuSEconfig.postfix...
Installing new /etc/postfix/main.cf
Executing /sbin/conf.d/SuSEconfig.profiles...
Executing /sbin/conf.d/SuSEconfig.sendmail...
Executing /sbin/conf.d/SuSEconfig.sortpasswd...
Finished.

```

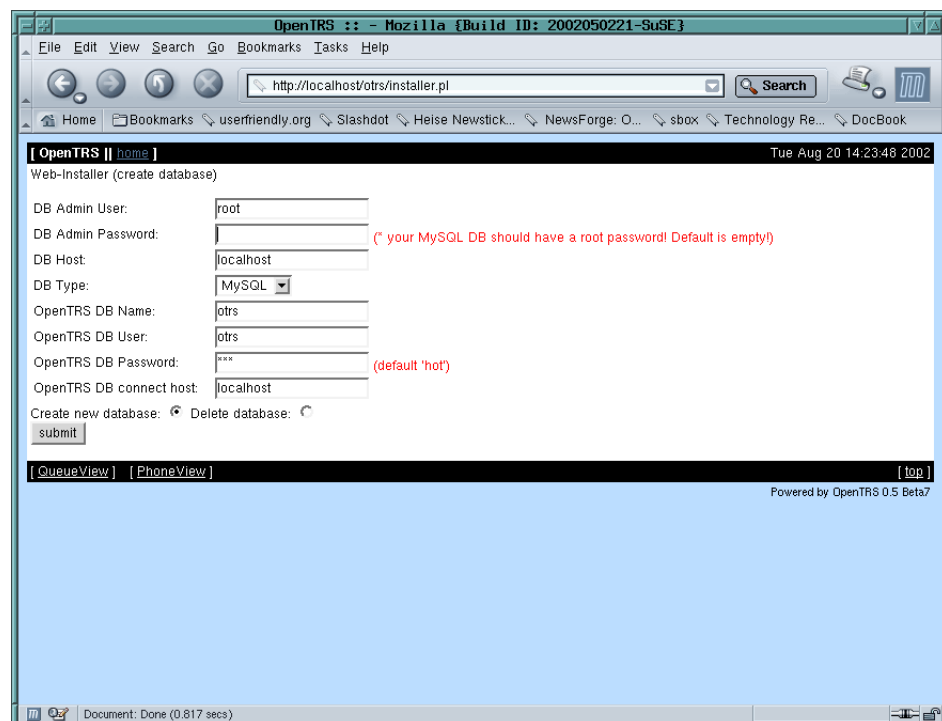
Once you installed the otrs.rpm on your system you have to reload the apache by `rcapache reload` to force apache to reload the config file. In case you haven't started the apache or mysql yet, it is a good time to do so (`rcapache start` and `rcmysql start`).

```

ernie:~ # rcapache reload
PERL PHP4 Python Reload httpd                                done

```

Now you have to setup the databases. Please open <http://localhost/otrs/installer.pl> to do so.



Warning

It is not a good idea to use the default passwords. You install a very important piece of software and you do not want anybody to be able to hack your database just because you didn't change the default password!

And because we want to keep the system as secure as possible we change some permissions by using the following script:

```
ernie:~ # /opt/OpenTRS/bin/SetPermissions.sh /opt/OpenTRS otrs wwwrun
SetPermissions.sh <$Revision: 1.4 $> - set OpenTRS file permissions
Copyright (c) 2002 Martin Edenhofer <martin@otrs.org>
Setting file permissions...
chown -R root.root /opt/OpenTRS
chown otrs.nogroup /opt/OpenTRS
chown otrs.nogroup /opt/OpenTRS/.fetchmailrc
chmod 0710 /opt/OpenTRS/.fetchmailrc
chown otrs.nogroup /opt/OpenTRS/.procmailrc
chmod 0644 /opt/OpenTRS/.procmailrc
chown -R otrs.nogroup /opt/OpenTRS/var/
chown -R wwwrun.nogroup /opt/OpenTRS/var/sessions/
otrs.nogroup /opt/OpenTRS/var/log/TicketCounter.log
chmod -R 755 /opt/OpenTRS/bin/
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/DeleteSessionIDs.pl
chmod: getting attributes of 'otrs.root': No such file or directory
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/UnlockTickets.pl
(chown && chmod 700) otrs.root /opt/OpenTRS/bin/otrs.getConfig
ernie:~ #
```

OK, now it is time to fire up the otrs. Do so on the command line:

```
ernie:~ # rcotrs restart-force
Shutting down OpenTRS
  Disable /opt/OpenTRS/bin/PostMaster.pl ... done.
no crontab for otrs
  Shutting down cronjobs ... failed!
Shutting down OpenTRS (completely)
  Shutting down Apache ... done.
  Shutting down MySQL ... done.
done

Starting OpenTRS (completely)
  Starting Apache ... done.
  Starting MySQL ... done.
Starting OpenTRS
  Checking Apache ... done.
  Checking MySQL ... done.
  Checking database connect... (It looks Ok!).
  Enable /opt/OpenTRS/bin/PostMaster.pl ... done.
  Checking otrs spool dir... done.
  Creating cronjobs (source /opt/OpenTRS/var/cron/*) ... done.

-->> http://ernie.example.com/otrs/index.pl <--
done
done

ernie:~ #
```

Finish! Wasn't that a piece of cake? ;-)

You can use the OTRS by opening the <http://ernie.example.com/otrs/index.pl> link.

1.2. Using the tar.gz file to install OTRS on any Linux/Unix platform

This section is a guide for installing OTRS on any Linux. Please use this way only in case you feel comfortable with it otherwise use the RPM. Before starting the installation have a look at <http://otrs.org/> (<http://www.otrs.org/>) and check if a newer and better version of the tar.gz file is available. If so please download it and use the newer documentation and the newer rpm.

1.2.1. Install

Software requirements?
=====

On all Perl-Platforms! You need:

- * min. Perl5
- * Database (e. g. MySQL, PostgreSQL)
- * Webserver (mod_perl isn't required but "very nice" to have)
- * some CPAN-Module (DBI, DBD:mysql, Digest::MD5) and for stats (GD, GD::Text, GD::Graph, GD::Graph::lines, GD::Text::Align)

Installation:
=====

This few steps describe an OTRS installation incl. webserver and database settings. The OTRS user is "otrs" and the home (root) directory is /opt/otrs (of cause you can choose an other directory or/and OTRS user).

1. Install CPAN Modules (if needed):

a) Install the RPMs if your distributions provides RPMs for the CPAN modules.

b) Install the modules via CPAN (<http://www.cpan.org/>)
perl -MCPAN -e shell;

```
...
install Digest::MD5
...
```

and maybe the GD stuff (stats support, not required!)

```
...
install GD
install GD::Text
install GD::Graph
install GD::Graph::lines
install GD::Text::Align
...
```

Check if all needed modules are installed:

```
-----
$shell:~> perl -cw /opt/otrs/bin/cgi-bin/index.pl
/opt/otrs/bin/cgi-bin/index.pl syntax OK
$shell:~> perl -cw /opt/otrs/bin/PostMaster.pl
/opt/otrs/bin/PostMaster.pl syntax OK
$shell:~>
```

If you get "syntax OK" it seems to be Ok. Go ahead.

2. Create user:

Add user:

```
-----
$shell: useradd -d /opt/otrs/ -c 'OTRS user' otrs
```

Add user to webserver group (if the webserver is not running with OTRS user):

```
-----
$shell: usermod -G nogroup otrs
```

(SuSE=nogroup, Red Hat=apache)

3. Install tar.gz:

```
-----
$shell: cd /opt/
$shell: tar -xzvf otrs-xxxx-xx-xx.tar-gz
$shell: chown -R /opt/otrs/* otrs
```

4. Demo config files:

There are several OTRS demo config files in \$OTRS_HOME/Kernel/*.dist and \$OTRS_HOME/Kernel/Config/*.dist. Make copies of all demo config files:

```

cp Kernel/Config.pm.dist Kernel/Config.pm

cd Kernel/Config/
for foo in *.dist; do cp $foo `basename $foo .dist`; done

Or if you are installing OTRS an a Windows system:

copy Kernel/Config.pm.dist Kernel/Config.pm

cd Kernel/Config/
copy *.dist *.

```

5. Webserver:

[follow README.webserver]

6. Database setup:

If you use MySQL, you can use the Web-Installer (<http://yourhost/otrs/installer.pl>).
Else follow README.database --> "DB - Setup Example".

7. Config file (\$HOME/Kernel/Config.pm):

If you used the Web-Installer, you can skip this point. If not,
set some Kernel::Config (\$HOME/Kernel/Config.pm) Options (FQDN, SystemID, TicketHook,
Home, ...)

8. File Permissions:

Set the file permissions with
"\$HOME/bin/SetPermissions.sh <OTRS_HOME> <OTRS_USER> <WEBSERVER_USER> [OTRS_GROUP] [WEB_GROUP]"
e. g.
Webserver with OTRS user: "SetPermissions.sh /opt/otrs otrs otrs"
Webserver with wwwrun user (e. g. SuSE): "SetPermissions.sh /opt/otrs otrs wwwrun"
Webserver with apache user (e. g. Redhat): "SetPermissions.sh /opt/otrs otrs apache users apache"

9. First Login:

<http://yourhost/otrs/index.pl>
User: root@localhost
PW: root

--> goto AdminArea and set some config settings (UserAdd, Queues, ...).

Finished.

10. First Email:

use the procmailrc of the OTRS user --> ~otrs/.procmailrc or e. g. /opt/otrs/.procmailrc

--> send emails to the otrs user (e. g. otrs@localhost)

or pipe an email directly into \$OTRS_HOME/bin/Postmaster.pl
(e. g. 'cat /opt/otrs/doc/test-email-1.box | /opt/otrs/bin/PostMaster.pl').

11. Cronjobs for the OTRS user:

There are several OTRS demo cronjobs in \$OTRS_HOME/var/cron/*.dist.
Make copies of all of the demo cronjobs:

cd var/cron
for foo in *.dist; do cp \$foo `basename \$foo .dist`; done

Or if you are installing OTRS an a Windows system:

cd var/cron
copy *.dist *.

Use \$OTRS_HOME/bin/Cron.sh {start|stop|restart} to start or stop this cronjobs

```

from $OTRS_HOME/var/cron/* (.dist will be ignored).

>> Note: Install this cronjobs as OTRS user. <<

Remark: For installation questions ask otrs@otrs.org (http://lists.otrs.org/).

Have a lot of fun.

Martin Edenhofer

(January 2003 Frankfurt/Germany)

EOF

```

1.2.2. Database

```

Where can I find the database description files?
=====

XML:
====
$HOME_OTRS/install/database/OpenTRS-schema.xml

The XML description files for torque which generate the SQL for your
target database e. g. MySQL, PostgreSQL, DB2, Oracle, ...)

More Infos: http://jakarta.apache.org/turbine/turbine-2/howto/torque-howto.html

MySQL:
-----
$HOME_OTRS/install/database/OpenTRS-schema.mysql.sql

PostgreSQL:
-----
$HOME_OTRS/install/database/OpenTRS-schema.postgresql.sql

Initial insert file:
=====
$HOME_OTRS/install/database/initial_insert.sql contains all needed standard
values. At first use the OpenTRS-schema/*.sql and the insert this file.


DB - Setup Example (MySQL):
=====
Create OTRS database:
-----
shell> mysql -u root -p -e 'create database otrs'

Create the OTRS tables:
-----
shell> mysql -u root -p otrs < install/database/OpenTRS-schema.mysql.sql

Insert initial data:
-----
shell> mysql -u root -p otrs < install/database/initial_insert.sql

Create an database user:
-----
shell> mysql -u root -p -e 'GRANT ALL PRIVILEGES ON otrs.* TO otrs@localhost IDENTIFIED BY "some-pass" WITH GR

Reload the grant tables of your mysql-daemon:
-----
shell> mysqladmin -u root -p reload

*****

```

```

*
* Change the DB-Settings (host, database, user and password) *
*
* $OTRS_HOME/Kernel/Config.pm
* [...]
* # Database
* # (The database name.)
* $Self->{Database} = 'otrs';
*
* # DatabaseUser
* # (The database user.)
* $Self->{DatabaseUser} = 'otrs';
*
* # DatabasePw
* # (The password of database user.)
* $Self->{DatabasePw} = 'some-pass';
* [...]
*
*****
EOF

```

1.2.3. Webserver

Which webserver is needed?

=====

I prefer the apache webserver (<http://httpd.apache.org>).

Configuration:

=====

"After" this steps, you will get the login page at

<http://your-host/otrs/index.pl> or <http://your-host/otrs/installer.pl>.

SuSE Linux:

=====

a) Install the RPM-Package (<http://otrs.org/> - "rpm -i otrs-xxx.rpm").

b) The manual way:

Use the "\$OTRS_HOME/scripts/suse-httpd.include.conf" include config file.

Add it to /etc/sysconfig/apache with HTTPD_CONF_INCLUDE_FILES

[...]

HTTPD_CONF_INCLUDE_FILES=/opt/otrs/scripts/suse-httpd.include.conf

[...]

Start SuSEconfig and restart the webserver (rcapache restart).

Or edit the httpd.conf directly:

=====

a)

*) Change the webserver user (normaly wwwrun) to the OTRS user (otrs).

[...]

User wwwrun

[...]

User otrs

[...]

*) If you can't change the user and group of your webserver (system-wide), because you have other applications running on this server, you can also work with group permissions (more tricky).

Use "\$HOME/bin/SetPermissions.sh <OTRS_HOME> <OTRS_USER> <WEBSEVER_USER> [OTRS_GROUP] [WEB_GROUP]"

e. g.

Webserver with otrs user: "SetPermissions.sh /opt/otrs otrs otrs"

Webserver with wwwrun user (e. g. SuSE): "SetPermissions.sh /opt/otrs otrs wwwrun"

```

Webserver with apache user (e. g. Redhat): "SetPermissions.sh /opt/otrs otrs apache"

b)
*)
Without mod_perl (just CGI):
=====
Add this to the cgi-bin stuff section in httpd.conf
[...]
ScriptAlias /otrs/ "/opt/otrs/bin/cgi-bin/"
[...]

*)
With mod_perl (speed!):
=====
Add this to the mod_perl stuff section in httpd.conf
[...]
Alias /otrs/ "/opt/otrs/bin/cgi-bin/"

<Location /otrs>
    SetHandler perl-script
    PerlHandler Apache::Registry
    Options ExecCGI
    PerlSendHeader On
</Location>

May you want use a mod_perl startup script. Compiled modules on startup
(speed!!) Use the mod_perl startup script which comes with otrs
(scripts/apache-perl-startup.pl).

- Add startup script (scripts/apache-perl-startup.pl) to httpd.conf
[...]
# load all otrs modules
PerlRequire /path/to/otrs/scripts/apache-perl-startup.pl
[...]

Edit the scripts/apache-perl-startup.pl script:

- Establish datababase connections on process startup (httpd).

[...]
use Apache ();
use Apache::DBI ();
Apache::DBI->connect_on_init('DBI:mysql:otrs', 'otrs', 'some-pass');
# Apache::DBI->connect_on_init($data_source, $username, $auth, \%attr)
[...]

- Change the otrs lib dir!

[...]
# --
# set otrs lib path!
# --
use lib "/path/to/otrs/";
use lib "/path/to/otrs/Kernel/cpan-lib";
[...]

Nice! You will love mod_perl! ,-)

c)
Restart the webserver
=====

d)
Web-Installer
=====
http://yourhost/otrs/installer.pl

First login
=====
http://yourhost/otrs/index.pl
User: root@localhost

```

PW: root

EOF

Chapter 2. Basics about a Trouble Ticket System

2.1. A simple example for a small Trouble Ticket System

What is a typical scenario for using OTRS?

Example: Bob is a manufacturer of VCRs and his customers often have problems to program the VCRs. So they send Bob an e-mail. Sometimes they send a second e-mail to show Bob how important their request is. They are wondering if Bob is alive and how fast he will answer. Bob is using a normal INBOX and reads his e-mails with pine, mutt or whatever e-mail client. Sometimes his two brothers Tim and Joe help him to answer the e-mails. They all use the same INBOX. Of course they have no clue that one customer wrote two e-mails and maybe Tim gives a different answer to the first e-mail than his brother Joe does for the second. So the client gets different information. Of course Bob has no client-history and no clue how much support he is offering. For the next VCR he is producing he has no feedback from his support. That is bad!

But Bob is a smart cookie so he installs OTRS. The e-mail from his customers are not anymore going to his personal INBOX but are routed to the OTRS account (normally called otrs). The OTRS account has some nifty procmail rules which pipe this e-mail messages to the system. The system answers the client a standard text which says that they received the e-mail and gives the client a Trouble Ticket Number (which is very important to trace the customers request). The client is happy because he knows that his valuable e-mail was received by Bob and his team. Anybody from Bob's team can open a webbrowser with the URL of the OTRS to have a look at the amount of received e-mails and to answer them. In case the customer Mr. Smith sent a question, Bob can answer it. Maybe Mr. Smith does not understand the question and sends a reply. But Bob is ill. Now even Tim can open this ticket and has access to the history of the ticket. He can read Bob's answer(s) and the original e-mail of Mr. Smith. Tim can answer to Mr. Smith and Mr. Smith even does not realize that he was handled by two different persons.

Of course this is just a very rough overview of the benefits of OTRS. Probably Bob receives some 100 e-mail messages a day which could be handled even without a Trouble Ticket System. But by the time you receive some 100000 or even just some 500 e-mails a day you will be happy to have a system which handles all the e-mails.

2.2. What is a trouble ticket in the OTRS?

Within the OTRS all trouble tickets are handled as normal e-mails. In case you want to attach something (e.g. a fax) it will be attached as an e-mail attachment. All tickets are stored on the harddrive in clear text format. The headers are stored in a database, too. The database is used to sort the tickets and to give quick access to them. For detailed information about this mechanism have a look in the source code.

2.3. What is a ticket queue?

For native english speaking folks this might be a bit funny but for non native speakers the term QUEUE does not make any sense at all. So we use this section to describe the idea and concept.

Normally a e-mail (and as described above a trouble ticket is stored as an e-mail) is stored in an INBOX. An INBOX is a large file and every new e-mail is just appended to the end of the INBOX. The e-mail client is parsing this file and sorts it as you want it (typically by date of receiving).

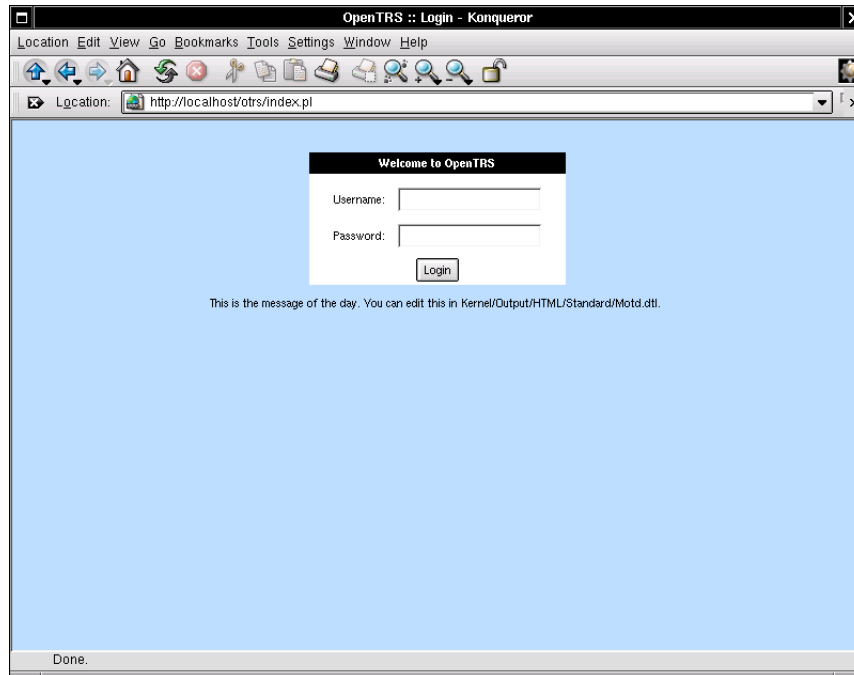
A queue is a mechanism to store many tickets within. As a user you do not know where the tickets are stored. You just know that a new ticket is e.g. in the RAW queue. An user (agent) can move a ticket from one queue to another. Why should he/she do this? You can use different queues to get more order and a better overview to your tickets. Let's assume you receive 200 e-mail messages (tickets) a day. And you have 3 teams of specialists. It doesn't make any sense to ask every specialist to read every ticket. It is a waste of time. So you have to create a fourth team which dispatches all the tickets in the INCOMING-QUEUE (or however you call this queue). The dispatch instance will have a quick (quick!) look at every ticket and move it then to a special queue. The 3 teams of specialists read their special queues only.

Chapter 3. First steps

3.1. Login as root and create a new account

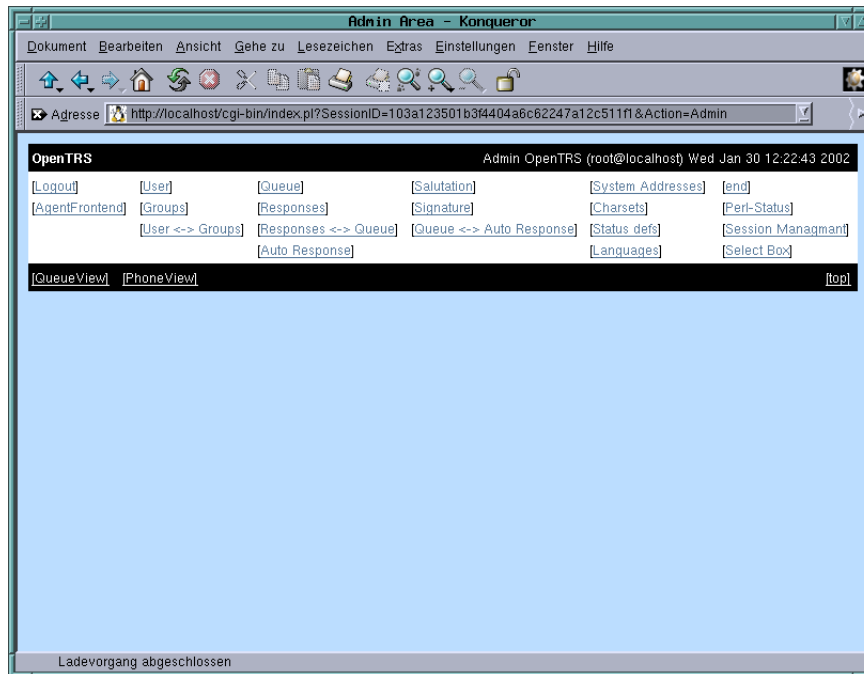
Let's presume that you have an installed OpenTRS system on your system and of course you do not want to waste too much time and see results quickly.

First you have to start your favourite webbrowser and have a look at <http://localhost/otrs/index.pl>

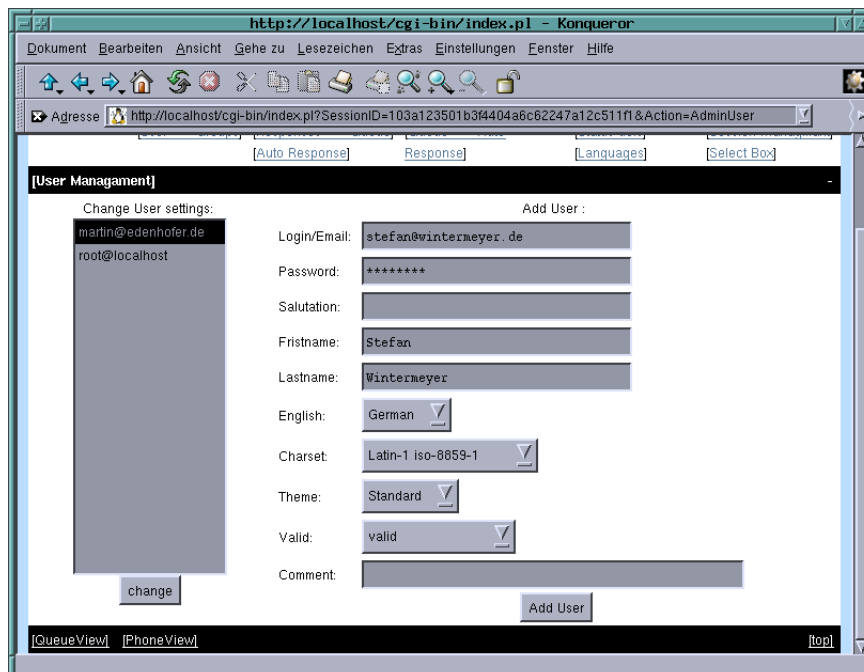


Login as root@localhost who by default has assigned the password root. Please change this in the admin part asap (of course it is totally independent from your normal linux root account).

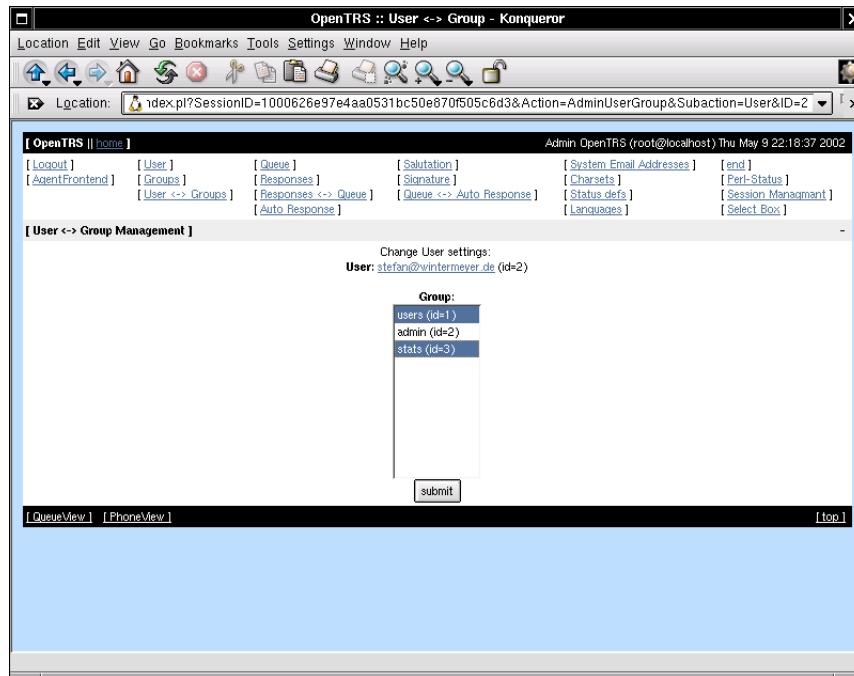
You are the root user of OpenTRS now. That means that you can do everything! You have the power, you are admin of the system. Normally you will not want to work as root and of course you need an account for all agents. So the first thing is to go into the admin interface.



The admin interface is the central of your power. You can create and delete users, groups, queues and all sort of usefull stuff here. Browse around and give it a try. But for now we want to create a new user at once.

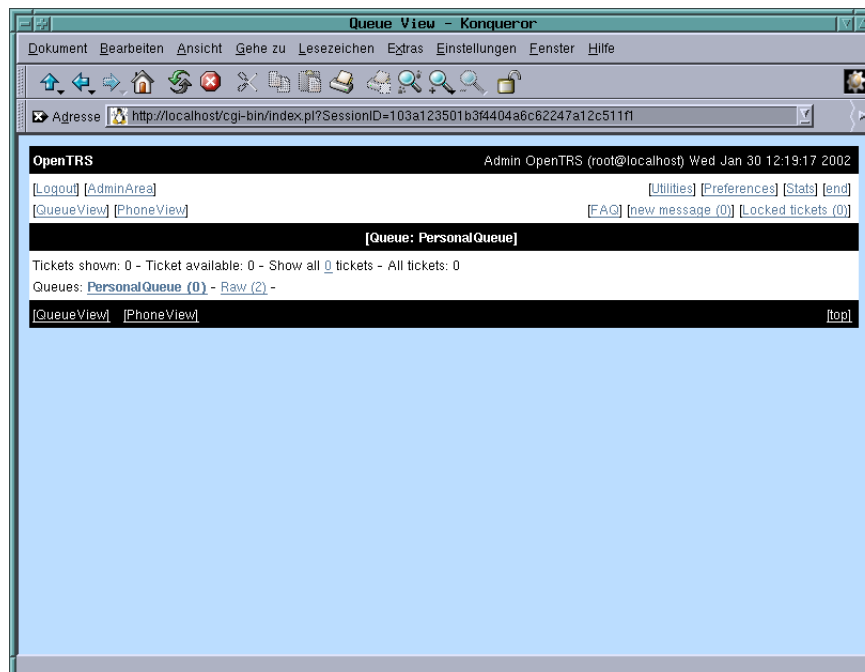


Now add the new user to the 'users' and 'stats' group or some other groups.

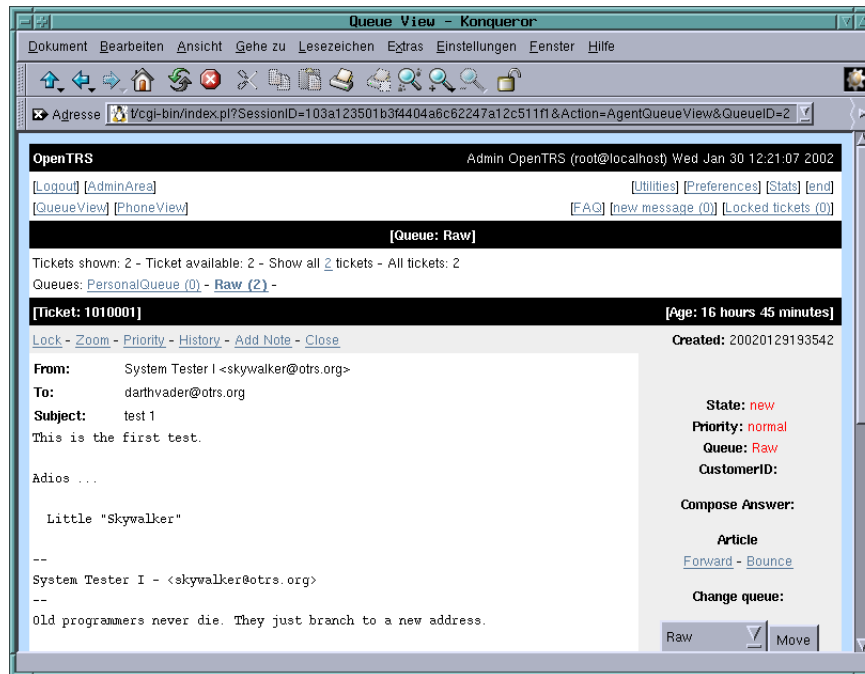


3.2. Login with user privilege

After you created the new user we ask you to logout and to login again as this new user. After login in he/she will see the following screen:



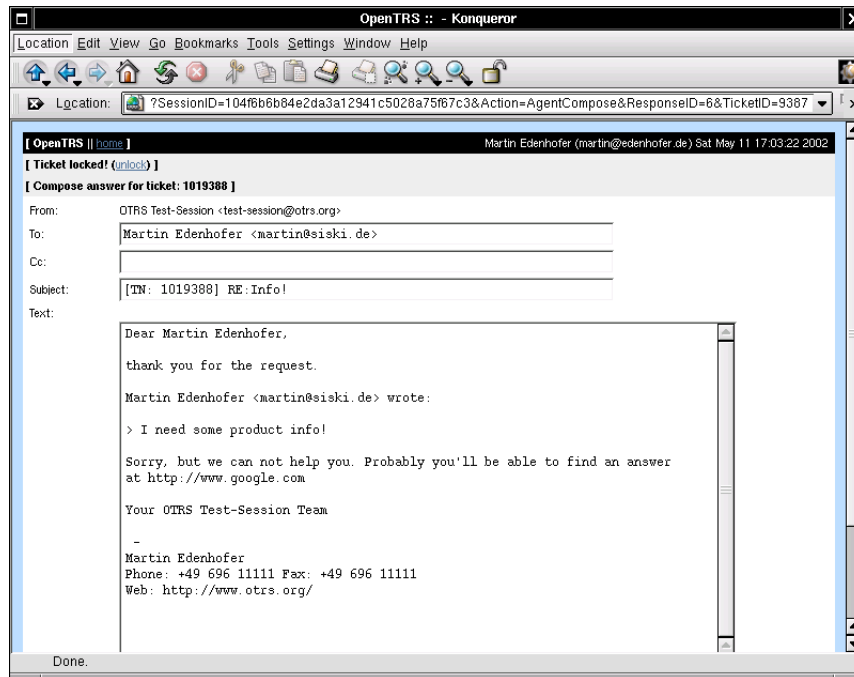
Between the second and third black bar (in this example) the user has access to the different queues. He/she can browse the queue by simply clicking on the link with the queue name.



Chapter 4. Ticket topics

4.1. Answer ticket via email

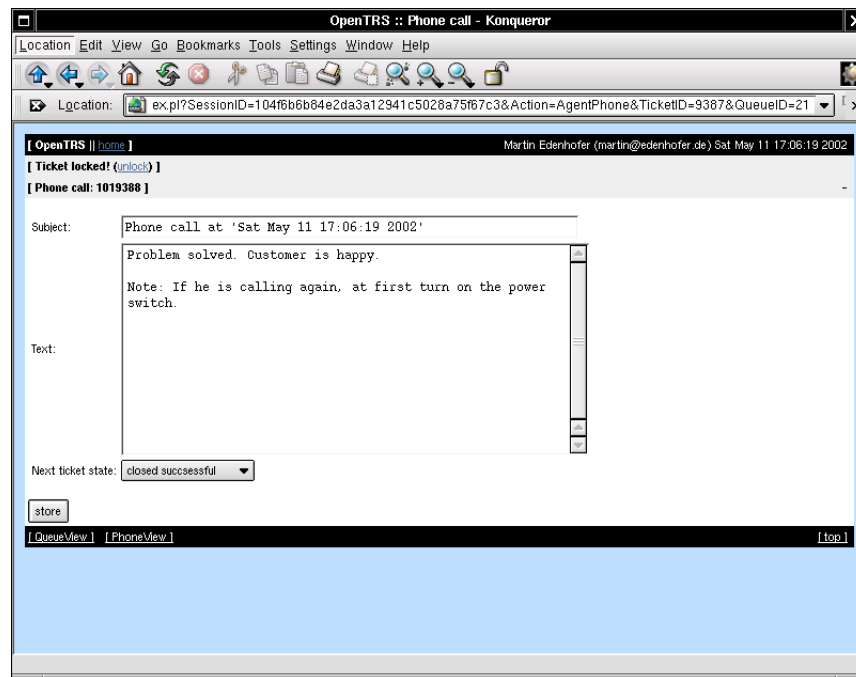
It's quite simply to answer tickets via email. Goto the QueueView or TicketZoom and click on one of the listed items under "Compose Answer (email)". A new screen will be opened, the compose screen. The cool thing is, that the compose screen includes the item-standard answer!



4.2. Answer ticket via phone

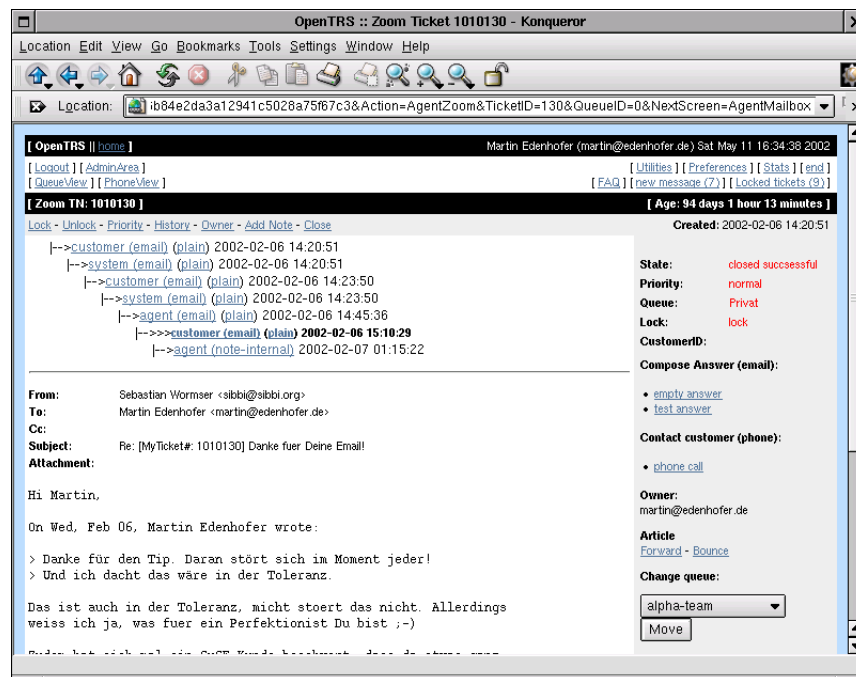
It's quite simply to answer tickets via phone. Just click on "phone call" (near Contact customer (phone)). A new screen will be

opened. Write down the phone notes and select new ticket type (open, closed, ...).



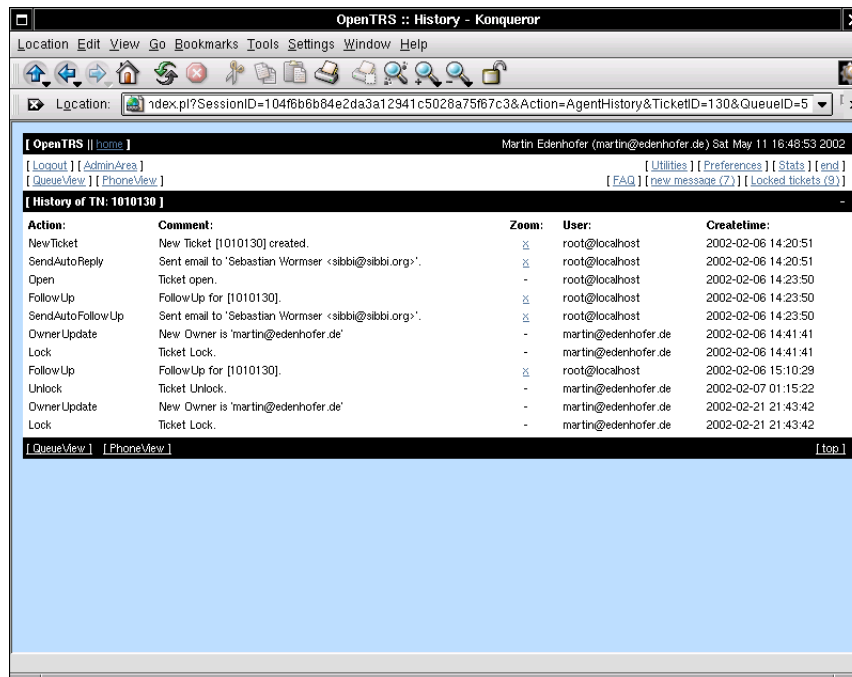
4.3. Zoom ticket

Zoom ticket is a detail view of one ticket. The screenshot shows you the ticket data (State, Priority, the Queue of the ticket, the Lock state, Owner and the article tree. Article tree means the whole communication thread.



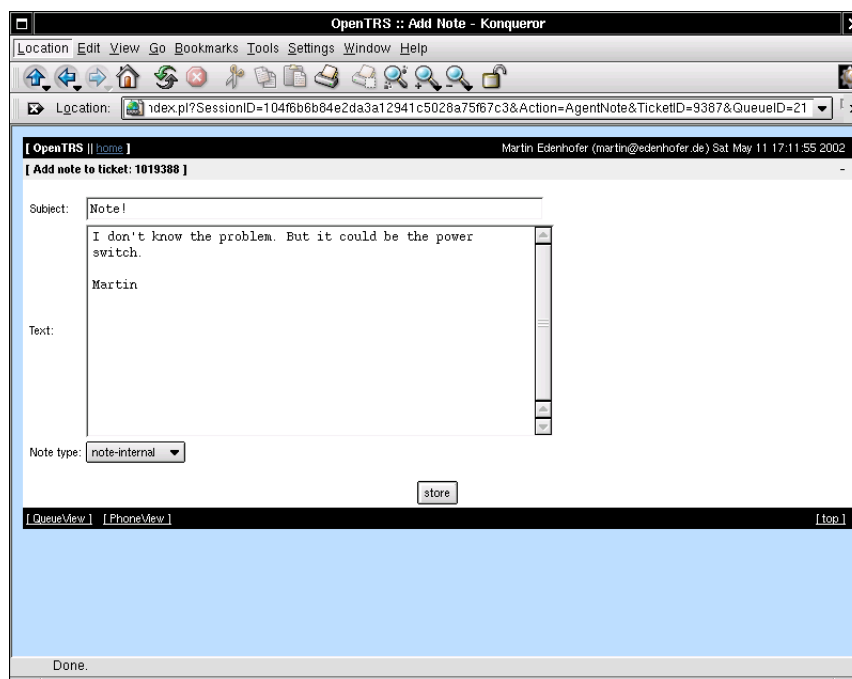
4.4. History of ticket

The ticket history shows you all actions on this ticket.



4.5. Add note to ticket

Each agent is able to add notes to tickets. Maybe he/she isn't sure to give a qualified answer. And you can select the type of note (internal, external, ...).



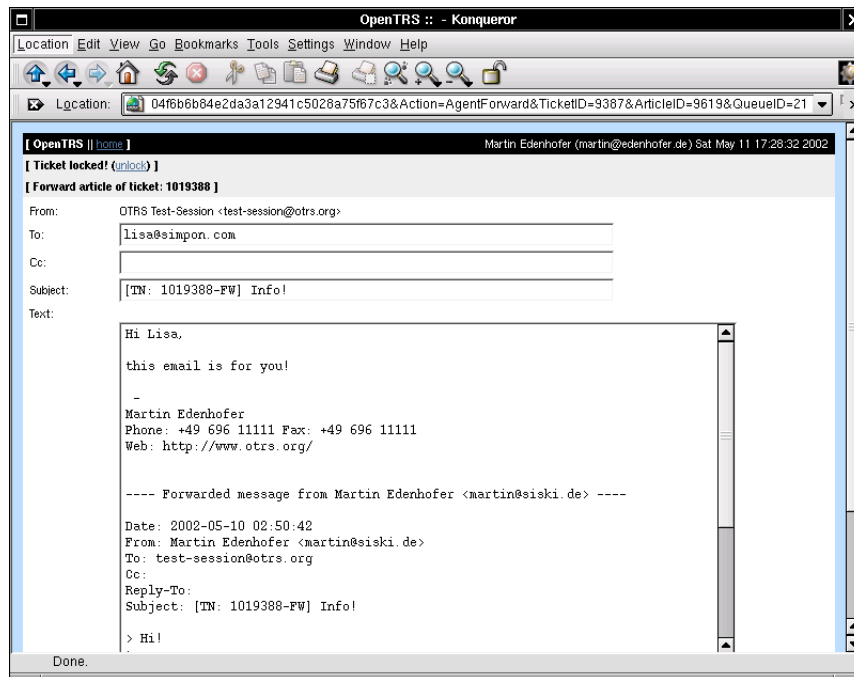
4.6. Close ticket

Close Tickets.

The screenshot shows a web browser window titled "OpenTRS :: Close - Konqueror". The address bar contains the URL: `jex.pl?SessionID=104f6b6b84e2da3a12941c5028a75f67c3&Action=AgentClose&TicketID=9387&QueueID=21`. The page header includes a navigation bar with links: [OpenTRS](#), [home](#), and a user profile for Martin Edenhofer (martin@edenhofer.de) on Sat May 11 17:26:29 2002. Below the header, there are status messages: "[Ticket locked! (unlock)]" and "[Close ticket: 1019388]". The main form area contains a "Subject:" field with the text "Close!", a "Note Text:" field with the text "Loop email.", a "Note type:" dropdown menu set to "note-internal", and a "Close type:" dropdown menu set to "closed successful". A "store" button is located at the bottom right of the form. At the very bottom, there are links for "[QueueView]", "[PhoneView]", and "[top]".

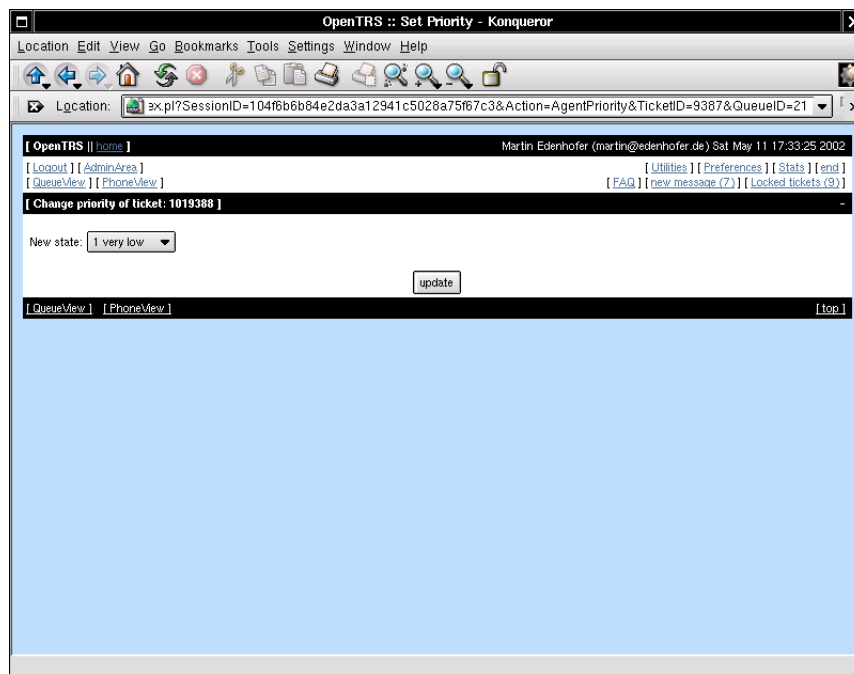
4.7. Forward ticket

Forward tickets if the email wasn't for your OpenTRS system.



4.8. Ticket priority

Set the ticket priority if necessary.



Chapter 5. First Ticket

5.1. How can somebody write e-mails to the OTRS?

The default installation will accept e-mails to the local user otrs (e-mail address <otrs@localhost>). This is good to start a little playing. Use your favourite e-mail client and send an e-mail to this address (of course you have to be on this system). Or you can have a look in the admin section of OTRS to add different e-mail addresses like <info@foo.org>. But please take care that these e-mails will be delivered to the **local otrs account** (to the ~otrs/.procmailrc(<http://www.procmail.org/>))! In case you are not familiar with the configuration of your sendmail or postfix have a look in the man-pages or send an e-mail to the mailinglist <otrs@otrs.org>.

Ok, ok, ... we show you two simple examples.

5.1.1. Config of fetchmail

In order to get e-mails from your mail server via a pop3 mailbox to the **OTRS machine/local otrs account** use fetchmail(<http://www.tuxedo.org/~esr/fetchmail/>). Note: a working SMTP configuration on the OTRS machine is condition.

Example 5-1. .fetchmailrc

```
#poll (mailserver) protocol POP3 user (user) password (password) is (localuser)
poll mail.example.com protocol POP3 user joe password mama is otrs
```

Don't forget to set the .fetchmailrc to 710 ("chmod 710 .fetchmailrc")!

So if "fetchmail -a" is executed (maybe via cron), all e-mails will be forwarded to the local otrs account.

5.1.2. Config of sendmail in SuSE Linux

If the machine (where OnTRS is running) is you mail server, you can work directly with the virtusertable or aliases.

Lets presume you have a plain SuSE Linux installation with sendmail as a default Mail Transfer Agent and you want to set up a OTRS e-mail account for the e-mail address <info@example.com>. All you have to do is to add a line to your /etc/mail/virtusertable file.

Example 5-2. /etc/mail/virtusertable

```
# /etc/mail/virtusertable
#
# Description:
#
# A domain-specific form of aliasing, allowing multiple virtual
# domains to be hosted on one machine.
#
# Examples:
#
#info@foo.com      foo-info
#info@bar.com      bar-info
#joe@bar.com       error:nouser No such user here
#jax@bar.com       error:D.S.N:unavailable Address invalid
#@baz.org          jane@example.net
#
# deliver this e-mails to the local user otrs!
info@example.com   otrs
support@example.com otrs
```

That's it (we actually added a second e-mail address with the name <support@example.com>! You have to run SuSEconfig.

```
skywalker:~ # SuSEconfig
Starting SuSEconfig, the SuSE Configuration Tool...
Running in quick mode.
```

```
Reading /etc/rc.config and updating the system...
Executing /sbin/conf.d/SuSEconfig.aaa_at_first...
Executing /sbin/conf.d/SuSEconfig.hostname...
Executing /sbin/conf.d/SuSEconfig.inittab...
Executing /sbin/conf.d/SuSEconfig.pam...
Executing /sbin/conf.d/SuSEconfig.sendmail...
Rebuilding /etc/mail/virtusertable.db.
Executing /sbin/conf.d/SuSEconfig.yppclient...
Finished.
```

Reload sendmail (just to be sure).

```
skywalker:~ # rcsendmail reload
Reload service sendmail                               done
```

Now all incoming e-mail to info@example.com will be delivered to the local user otrs.

Every e-mail message to the user otrs will be handled by the procmail-rule of otrs which pipes the e-mail to the system. You will find the e-mail in the RAW queue.

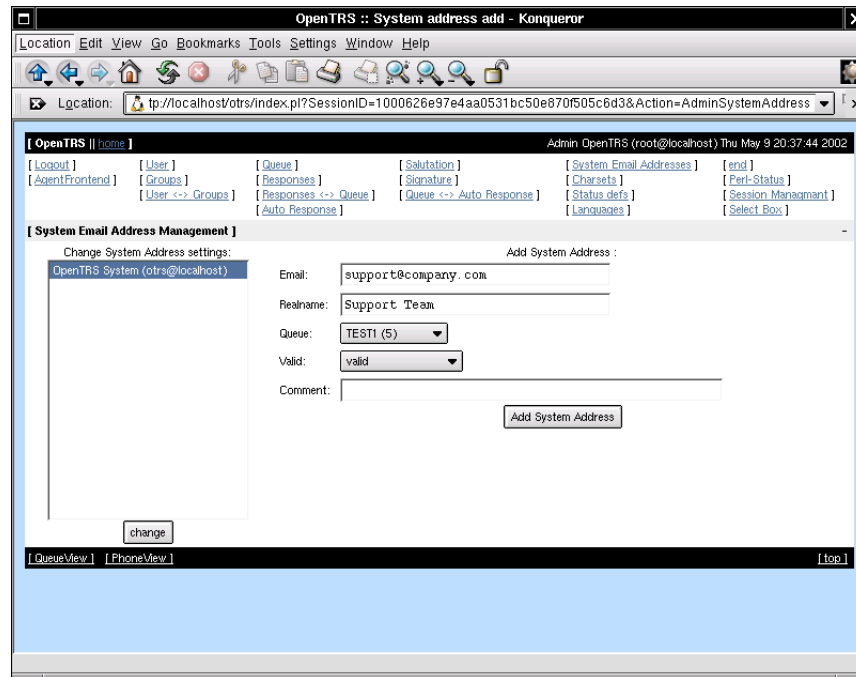
Chapter 6. Dispatching of incoming email

6.1. With OTRS

OTRS is able to dispatch incoming emails via "To" address. Configurable via admin interface.

Example

Add a new system email address (AdminArea -->> System Email Addresses).



In this case, all incoming emails (with To: support@company.com) will be dispatched to the TEST1 queue.

6.2. With procmail (for more complex dispatching)

Procmail is a very common e-mail filter in the Linux environment. It will be probably installed on your system. If not have a look at the *procmail homepage*(<http://www.procmail.org/>).

The X-OTRS-Queue Mail-Header

The X-OTRS-Queue Mail-Header is parsed by OTRS and OTRS will pipe these e-mails direct in this queue. Procmail and fromail can be used to create a powerful dispatcher tool.

Examples

The following examples are copied from the *procmailex* man-page. Feel free to have a look into it (actually it is quite a good idea). Of course we changed the wording a bit (to fit it into the queueing idea).

Sort out all mail coming from the scuba-dive mailing list into the scuba queue.

```
:0 fhw :
* ^TOscuba
| formail -I "X-OTRS-Queue: scuba"
```

Forward all mail from peter about compilers into the william queue.

```
:0 fhw :
* ^From.*peter
* ^Subject:.*compilers
| formail -I "X-OTRS-Queue: william"
```

And here a last example, the whole .procmailrc.

Example 6-1. .procmailrc

```
# --
# .procmailrc - procmailrc of the OTRS user
# Copyright (C) 2001-2002 Martin Edenhofer (martin+code at otrs.org)
# --
# $Id: procmail.sgml,v 1.6 2002/09/01 12:09:53 martin Exp $
# --
# This software comes with ABSOLUTELY NO WARRANTY. For details, see
# the enclosed file COPYING for license information (GPL). If you
# did not receive this file, see http://www.gnu.org/licenses/gpl.txt.
# --

SYS_HOME=$HOME

PATH=/bin:/usr/bin:/usr/local/bin
MONTHFOLDER='date +%Y-%m'
YEARFOLDER='date +%Y'
LOGFILE=$SYS_HOME/var/log/procmail-$MONTHFOLDER.log
VERBOSE=on

# --
# Remove all X-OTRS Header (allow this only for trusted email)
# e. g. from *@example.com
# --
:0 fhw :
* !^From.*@example.com
| grep -vi '^X-OTRS-'

# --
# Examples for queue presorting.
# --

:0 fhw :
* ^List-Id:.*OpenAntiVirus
| formail -I "X-OTRS-Queue: OpenAntiVirus"

:0 fhw :
* ^Sender:.*example.com
| formail -I "X-OTRS-Queue: example"

:0 fhw :
* TO:.*BUGTRAQ
| formail -I "X-OTRS-Queue: BUGTRAQ"

# --
# Backup of all incoming emails.
# It's always better to have a backup of all incoming emails!
# --
:0 c :
$SYS_HOME/var/INBOX.Backup.$MONTHFOLDER

# --
# Pipe all email into the PostMaster process.
# --
:0 :
| $SYS_HOME/bin/PostMaster.pl

# --
# spool all the rest (which the PostMaster.pl can't process!)
# If the database is down or the PostMaster.pl exit was not '0'!
# --
:0 :
$SYS_HOME/var/spool/

# --
# end of .procmailrc
# --
```

Please have a look into the procmailrc man-page for more examples.

6.3. Example with procmail and a webform

This is an example for a webform to generate an email for OTRS. You will find this perl script in \$OTRS_HOME/scripts/webform.pl

You have a Topic, From, Email, Subject and Message field.

Change the config settings for the webform:

```
# --
# web form options
# --
my $Ident = 'ahfiw2Fw32r230dddl2foeo3r';
# sendmail location and options
my $Sendmail = '/usr/sbin/sendmail -t -i -f ';
# email where the emails of the form will send to
my $OpenTRSEmail = 'otrs-system@example.com';
# topics and dest. queues
my %Topics = (
    # topic => OTRS queue
    'Info' => 'info',
    'Support' => 'support',
    'Bugs' => 'bugs',
    'Sales' => 'sales',
    'Billing' => 'billing',
    'Webmaster' => 'webmaster',
);
```

Take care, that your used \$OpenTRSEmail and the used OTRS queues exists in your OTRS system.

Now, change the OTRS .procmailrc from:

```
# --
# Remove all X-OTRS Header (allow this only for trusted email)
# e. g. from *@example.com
# --
:0 fhw :
* !^From.*@example.com
| grep -vi '^X-OTRS-'

to:

# --
# Remove all X-OTRS Header (allow this only for trusted email)
# just not emails with "X-OTRS-Ident: ahfiw2Fw32r230dddl2foeo3r" header!
# --
:0 fhw :
* !^X-OTRS-Ident: ahfiw2Fw32r230dddl2foeo3r
| grep -vi '^X-OTRS-'
```

If a email is generated by the webform.pl and sent to the \$OpenTRSEmail it will be dispatched to the topic=>queue.

Chapter 7. Config File

OTRS got a lot of config options. There are two config files. Kernel/Config.pm and Kernel/Config/Defaults.pm.

Kernel/Config/Defaults.pm is the default config file which should not be changed. You will find all possible config option in this file. Is quite simple to read.

Kernel/Config.pm.dist is the example file for Kernel/Config.pm (custom config file) which must be copied (cp Kernel/Config.pm.dist Kernel/Config.pm).

How it works! The Kernel/Config/Defaults.pm (default config settings) is loaded at first, then the Kernel/Config.pm (custom config file). So if you want to change the default config settings, copy (copy and paste) the needed options from Kernel/Config/Defaults.pm into Kernel/Config.pm and change the values like you want.

Now we will describe some config features in this chapter.

7.1. Kernel/Config.pm - TicketHook

You can configure the value of the TicketHook which is the first part of the subject of each e-mail (e.g. [MyTicket: 007]).

Example 7-1. TicketHook

```
[...]
# TicketHook
# (To set the Ticket identifier. Some people want to
# set this to e. g. 'Call#', 'MyTicket#' or 'Ticket#'.)
$Self->{TicketHook} = 'Ticket#',
[...]
```

Note: Don't use 'TN', because MS Outlook is replacing "TN: 54968797" with "RE: 54968797" and then you will run in trouble.

7.2. FQDN

The OTRS full qualified domain name. Will be used for email messages id's.

Example 7-2. Kernel/Config.pm - FQDN

```
[...]
# FQDN
# (Full qualified domain name of your system.)
$Self->{FQDN} = 'yourhost.example.com';
[...]
```

7.3. Log

The OTRS log method.

Example 7-3. Kernel/Config.pm - LogModule

```
[...]
# -----#
# log settings                                     #
# -----#

# LogModule
# (log backend module)
$Self->{LogModule} = 'Kernel::System::Log::SysLog';
#   $Self->{LogModule} = 'Kernel::System::Log::File';

# param for LogModule Kernel::System::Log::File (required!)
#   $Self->{'LogModule::LogFile'} = '/tmp/otrs.log';
[...]
```

7.4. User Authentication

The OTRS user authentication method.

Example 7-4. Kernel/Config.pm - AuthModule

```
[...]
# -----#
# authentication settings                                #
# (enable what you need, auth against otrs db or         #
# against a LDAP directory)                             #
# -----#

# This is the auth. module against the otrs db
$Self->{'AuthModule'} = 'Kernel::System::Auth::DB';

# This is an example configuration for an LDAP auth. backend.
# (take care that Net::LDAP is installed!)
# $Self->{'AuthModule'} = 'Kernel::System::Auth::LDAP';
# $Self->{'AuthModule::LDAP::Host'} = 'ldap.example.com';
# $Self->{'AuthModule::LDAP::BaseDN'} = 'dc=example,dc=com';
# $Self->{'AuthModule::LDAP::UID'} = 'uid';
# The following is valid but would only be necessary if the
# anonymous user do NOT have permission to read from the LDAP tree
# $Self->{'AuthModule::LDAP::SearchUserDN'} = "";
# $Self->{'AuthModule::LDAP::SearchUserPw'} = "";
[...]
```

7.5. Max. Postmaster email

OTRS is able to send automatically email replay. So it's possible to create an email loop (of course we check bulk headers but other some strange systems not!).

Example 7-5. Kernel/Config.pm - PostmasterMaxEmails

```
[...]
# PostmasterMaxEmails
# (Max post master daemon email to own email-address a day.
# Loop-Protection!) [default: 40]
$Self->{PostmasterMaxEmails} = 40;
[...]
```

7.6. Ticket number format

You can choose between four different OTRS formats. AutoIncrement is default.

Example 7-6. Kernel/Config.pm - TicketNumberGenerator

```
[...]
# TicketNumberGenerator
#
# Kernel::System::Ticket::Number::AutoIncrement (default) --> auto increment
#   ticket numbers "SystemID.Counter" like 1010138 and 1010139.
#
# Kernel::System::Ticket::Number::Date --> ticket numbers with date
#   "Year.Month.Day.SystemID.Counter" like 200206231010138 and 200206231010139.
#
# Kernel::System::Ticket::Number::DateChecksum --> ticket numbers with date and
#   check sum the counter will be rotated daily (my favorite)
#   "Year.Month.Day.SystemID.Counter.CheckSum" like 2002070110101520 and 2002070110101535.
#
# Kernel::System::Ticket::Number::Random -->
#   random ticket numbers "SystemID.Random" like 100057866352 and 103745394596.

$Self->{TicketNumberGenerator} = 'Kernel::System::Ticket::Number::AutoIncrement';
[...]
```

You can also create a new (your own) module. The module needs just two functions (the whole abstraction). "CreateTicketNr()" to generate a new ticket number and "GetTNByString()" to get a ticket number by string.

A nice example is the Kernel::System::Ticket::Number::Random(<http://otrs.org/cgi-bin/cvsweb.cgi/otrs/Kernel/System/Ticket/Number/Random.pm>) module.

7.7. Database settings

Example 7-7. Kernel/Config.pm - Database settings

```
[...]
# DatabaseHost
# (The database host.)
$Self->{DatabaseHost} = 'localhost';

# Database
# (The database name.)
$Self->{Database} = 'otrs';

# DatabaseUser
# (The database user.)
$Self->{DatabaseUser} = 'otrs';

# DatabasePw
# (The password of database user.)
$Self->{DatabasePw} = 'some-pass';

# DatabaseDSN
# (The database DSN for MySQL ==> more: "man DBD::mysql")
$Self->{DatabaseDSN} = "DBI:mysql:database=$Self->{Database};host=$Self->{DatabaseHost}";

# (The database DSN for PostgreSQL ==> more: "man DBD::Pg")
#$Self->{DatabaseDSN} = "DBI:Pg:dbname=$Self->{Database}";
[...]
```

7.8. ASP (Application Service Provider) options

Should the agent be able to move tickets into queue which it isn't member of the group (Helpfully if you use OTRS in ASP (Application Service Provider) mode).

Example 7-8. Kernel/Config.pm - MoveInToAllQueues

```
[...]
# MoveInToAllQueues
# (Possible to move in all queue? Not only queue which
# the own groups) [1|0]
$Self->{MoveInToAllQueues} = 1;
[...]
```

Should the agent be able to change the ticket owner to everyone? (Helpfully if you use OTRS in ASP (Application Service Provider) mode).

Example 7-9. Kernel/Config.pm - ChangeOwnerToEveryone

```
[...]
# ChangeOwnerToEveryone -> useful for ASP
# (Possible to change owner of ticket ot everyone) [0|1]
$Self->{ChangeOwnerToEveryone} = 0;
[...]
```

7.9. Custom Queue

Some people want to set the "Custom Queue" name (The queue of your favorite queues).

Example 7-10. Kernel/Config.pm - Custom Queue

```
[...]
# CustomQueue
# (The name of custom queue.)
$Self->{CustomQueue} = 'PersonalQueue';
[...]
```

7.10. Agent notification

If there is a new ticket or a follow up for a ticket, OTRS will inform the agent(s).

Example 7-11. Kernel/Config.pm - Agent notification

```
[...]
# -----#
# notification stuff                                #
# -----#
# notification sender
$Self->{NotificationSenderName} = 'OTRS Notification Master';
$Self->{NotificationSenderEmail} = 'otrs@' . $Self->{FQDN};

# new ticket
$Self->{NotificationSubjectNewTicket} = 'New ticket notification! (<OTRS_CUSTOMER_SUBJECT[10]>)';
$Self->{NotificationBodyNewTicket} = "
Hi,

there is a new ticket!

<snip>
<OTRS_CUSTOMER_EMAIL[6]>
<snip>

http://$Self->{FQDN}/otrs/index.pl?Action=AgentZoom&TicketID=<OTRS_TICKET_ID>

Your OTRS Notification Master

";

# follow up
$Self->{NotificationSubjectFollowUp} = 'You got follow up! (<OTRS_CUSTOMER_SUBJECT[10]>)';
$Self->{NotificationBodyFollowUp} = "
Hi <OTRS_USER_FIRSTNAME>,

you got a follow up!

<snip>
<OTRS_CUSTOMER_EMAIL[6]>
<snip>

http://$Self->{FQDN}/otrs/index.pl?Action=AgentZoom&TicketID=<OTRS_TICKET_ID>

Your OTRS Notification Master

";
[...]
```

7.11. Session management

The OTRS session management.

Example 7-12. Kernel/Config.pm - Session management

```
[...]
# -----#
# session settings                                     #
# -----#

# SessionModule (replace old SessionDriver!!!)
# (How should be the session-data stored?
# Advantage of DB is that you can split the
# Frontendserver from the DB-Server. fs is faster.)
$Self->{SessionModule} = 'Kernel::System::AuthSession::DB';
# $Self->{SessionModule} = 'Kernel::System::AuthSession::FS';
# $Self->{SessionModule} = 'Kernel::System::AuthSession::IPC';

# SessionCheckRemoteIP
# (If the application is used via a proxy-farm then the
# remote ip address is mostly different. In this case,
# turn of the CheckRemoteID. ) [1|0]
$Self->{SessionCheckRemoteIP} = 1;

# SessionDeleteIfNotRemoteID
# (Delete session if the session id is used with an
# invalied remote IP?) [0|1]
$Self->{SessionDeleteIfNotRemoteID} = 1;

# SessionMaxTime
# (Max valid time of one session id in second (8h = 28800).)
$Self->{SessionMaxTime} = 28800;

# SessionDeleteIfTimeToOld
# (Delete session's witch are requested and to old?) [0|1]
$Self->{SessionDeleteIfTimeToOld} = 1;

# SessionUseCookie
# (Should the session management use html cookies?
# It's more comfortable to send links ==> if you have a valid
# session, you don't have to login again.) [0|1]
# Note: If the client browser disabled html cookies, the system
# will work as usual, append SessionID to links!
$Self->{SessionUseCookie} = 1;
[...]
```

7.12. URL login and logout settings

Example 7-13. Kernel/Config.pm - URL login and logout settings

```
[...]
# -----#
# URL login and logout settings                         #
# -----#

# LoginURL
# (If this is anything other than "", then it is assumed to be the
# URL of an alternate login screen which will be used in place of
# the default one.)
$Self->{LoginURL} = "";
# $Self->{LoginURL} = 'http://host.example.com/cgi-bin/login.pl';

# LogoutURL
# (If this is anything other than "", it is assumed to be the URL
# of an alternate logout page which users will be sent to when they
# logout.)
$Self->{LogoutURL} = "";
# $Self->{LogoutURL} = 'http://host.example.com/cgi-bin/login.pl';
[...]
```

7.13. agent area default settings

Example 7-14. Kernel/Config.pm - agent area default settings

```
[...]
# -----#
# agent area default settings                                     #
# -----#

# ViewableTickets
# (The default viewable tickets a page.)
$Self->{ViewableTickets} = 25;

# ViewableTicketLines
# (Max viewable ticket lines in the QueueView.)
$Self->{ViewableTicketLines} = 18;

# ViewableTicketLinesZoom
# (Max viewable ticket lines in the QueueZoom.)
$Self->{ViewableTicketLinesZoom} = 6000;

# MaxLimit
# (Max viewable tickets a page.)
$Self->{MaxLimit} = 150;

# RefreshOptions
# (Refresh option list for preferences)
$Self->{RefreshOptions} = {
    " => 'off',
    2  => ' 2 minutes',
    5  => ' 5 minutes',
    7  => ' 7 minutes',
    10 => '10 minutes',
    15 => '15 minutes',
};

# Highlight*
# (Set the age and the color for highlighting of old queue
# in the QueueView.)
# highlight age1 in min
$Self->{HighlightAge1} = 1440;
$Self->{HighlightColor1} = 'orange';
# highlight age2 in min
$Self->{HighlightAge2} = 2880;
$Self->{HighlightColor2} = 'red';

# -----#
# AgentUtil                                                         #
# -----#

# default limit for Tn search
$Self->{SearchLimitTn} = 20;

# default limit for Txt search
$Self->{SearchLimitTxt} = 20;

# viewable ticket lines by search util
$Self->{ViewableTicketLinesBySearch} = 15;

# -----#
# Ticket stuff                                                         #
# (Viewable tickets in queue view)                                     #
# -----#
# ViewableLocks
# default: ["'unlock'", "'tmp_lock'"]
$Self->{ViewableLocks} = ["'unlock'", "'tmp_lock'"];

# ViewableStats
# default: ["'open'", "'new'"]
$Self->{ViewableStats} = ["'open'", "'new'"];
```

```
# ViewableSenderTypes
# default:  ['customer']
$Self->{ViewableSenderTypes} = ['customer'];
[...]
```

Chapter 8. Language translations

The OTRS webfrontend supports different frontend languages. The language translation files are located under Kernel/Language/*.pm.

8.1. New translation files

If you want to translate OpenTRS in a new language, you have to do five steps:

- Take the current German translation (Kernel/Language/de.pm) from CVS (<http://cvs.otrs.org/>).
- Change the package name (z. g. "package Kernel::Language::de;" to "package Kernel::Language::fr;") and translate each word/sentence.
- Add the new language translation to the system via adding "\$Self->{DefaultUsedLanguages}->{fr} = 'French';" to your Kernel/Config.pm.
- If you use mod_perl, restart your webserver and you will have the new language.
- Send the new translation file to feedback at otrs.org - Thanks!

Now you can select the new language in your preferences screen.

Example 8-1. Kernel/Language/de.pm - Old file

```
# --
# Kernel/Language/de.pm - provides de language translation
# Copyright (C) 2002-2003 Martin Edenhofer xxxxxxxxxxxxxxxxxxxxxx
# --
# $Id: language-translation.sgml,v 1.7 2003/01/05 21:43:36 martin Exp $
# --
# This software comes with ABSOLUTELY NO WARRANTY. For details, see
# the enclosed file COPYING for license information (GPL). If you
# did not receive this file, see http://www.gnu.org/licenses/gpl.txt.
# --
package Kernel::Language::de;

use strict;

use vars qw($VERSION);
$VERSION = '$Revision: 1.7 $';
$VERSION =~ s/^\.*:\s(\d+\.\d+)\s.*\$/\1/;

# --
sub Data {
    my $Self = shift;
    my %Param = @_;
    my %Hash = ();

    # $$START$$
    # Last translation Fri Jan 3 20:39:15 2003 by

    # possible charsets
    $Self->{Charset} = ['iso-8859-1', 'iso-8859-15', ];
    # date formats (%A=WeekDay;%B=LongMonth;%T=Time;%D=Day;%M=Month;%Y=Year;)
    $Self->{DateFormat} = '%D.%M.%Y %T';
    $Self->{DateFormatLong} = '%A %D %B %T %Y';
    $Self->{DateInputFormat} = '%D.%M.%Y - %T';

    %Hash = (
        # Template: AAABase
        ' 2 minutes' => ' 2 Minuten',
        ' 5 minutes' => ' 5 Minuten',
        ' 7 minutes' => ' 7 Minuten',
        '10 minutes' => '10 Minuten',
        '15 minutes' => '15 Minuten',
        'AddLink' => 'Link hinzufügen',
        'AdminArea' => 'AdminBereich',
        'all' => 'alle',
```



```

    'All' => 'Alle',
    'Attention' => 'Achtung',
[...]
```

To:

Example 8-2. Kernel/Language/fr.pm - New file

```

# --
# Kernel/Language/fr.pm - provides fr language translation
# Copyright (C) 2002 Bernard Choppy xxxxxxxxxxxxxxxxxxxxxxxx
# Copyright (C) 2002-2003 Nicolas Goralski xxxxxxxxxxxxxxxxxxxxxxxx
# --
# $Id: language-translation.sgml,v 1.7 2003/01/05 21:43:36 martin Exp $
# --
# This software comes with ABSOLUTELY NO WARRANTY. For details, see
# the enclosed file COPYING for license information (GPL). If you
# did not receive this file, see http://www.gnu.org/licenses/gpl.txt.
# --
package Kernel::Language::fr;

use strict;

use vars qw($VERSION);
$VERSION = '$Revision: 1.7 $';
$VERSION =~ s/^\.*:\s(\d+\.\d+)\s.*\$/\$/;
# --
sub Data {
    my $Self = shift;
    my %Param = @_;
    my %Hash = ();

    # $$START$$
    # Last translation Fri Jan  3 20:40:04 2003 by

    # possible charsets
    $Self->{Charset} = ['iso-8859-1', 'iso-8859-15', ];
    # date formats (%A=WeekDay;%B=LongMonth;%T=Time;%D=Day;%M=Month;%Y=Year;)
    $Self->{DateFormat} = '%D.%M.%Y %T';
    $Self->{DateFormatLong} = '%A %D %B %T %Y';
    $Self->{DateInputFormat} = '%D.%M.%Y - %T';

    %Hash = (
    # Template: AAABase
    ' 2 minutes' => ' 2 minutes',
    ' 5 minutes' => ' 5 minutes',
    ' 7 minutes' => ' 7 minutes',
    '10 minutes' => '10 minutes',
    '15 minutes' => '15 minutes',
    'AddLink' => 'Ajouter un lien',
    'AdminArea' => 'Zone d\'administration',
    'all' => 'tout',
    'All' => 'Tout',
    'Attention' => 'Attention',
[...]
```

Chapter 9. Customize the frontend

It's possible to customize the frontend independently from OTRS releases. How? It's quite simply. The magic key is dtl (Dynamic Template Language). All frontend masks are located under `~otrs/Kernel/Output/HTML/<THEME>/*.dtl`. Default is the "Standard" Theme.

So you have the power to customize each OTRS side like you want! Or to create new themes.

9.1. The dtl syntax

Comment

Comment is a simple '#'.

```
# --  
# this is a comment  
# --
```

Set a variable

```
<dtl set $Data{"Test1"} = "German">
```

Note: `$Data{"xyz"}` exists only the current dtl file and `$Env{"xyz"}` exists the whole dtl files. New: `$Config{"xyz"}` is not read only anymore and exists the whole program! (2002-05-22 / 0.5 BETA5)

Print a variable

To print a variable on the screen, use simply:

```
$Data{"xyz"} or $Env{"xyz"}
```

Text translations

```
$Text{"This should be translated"}
```

Take care, that the translation exists in the `"$HOME_OTRS/Kernel/Language/*.pm"` files. If there isn't a translation, the given text will be shown.

Condition

```
<dtl if ($Text{"Lock"} eq "Lock") { $Data{"FrontendLanguage"} = "English"; }>
```

It's only possible to store things into `$Data{"xyz"}` and `$Env{"xyz"}`.

Get a config option - \$Config{}

```
$Config{"Sendmail"}
```

Common environment variables - \$Env{}

```
$Env{"SessionID"} --> the current session id  
$Env{"Time"} --> the current time e. g. 'Thu Dec 27 16:00:55 2001'  
$Env{"CGIHandle"} --> the current CGI handle e. g. 'index.pl'  
$Env{"UserCharset"} --> the current site charset e. g. 'iso-8859-1'  
$Env{"Baselink"} --> the baselink --> index.pl?SessionID=...  
$Env{"UserFirstname"} --> e. g. Dirk  
$Env{"UserLastname"} --> e. g. Hohndel  
$Env{"UserLogin"} --> e. g. mgg@x11.org  
$Env{"Action"} --> the current action  
$Env{"Subaction"} --> the current subaction
```

System calls

To get the output of a system command use:

```
# execute system call
<dtl system-call $Data{"uptime"} = "uptime">

# print
$Data{"uptime"}

or

# execute system call
<dtl system-call $Data{"procinfo"} = "procinfo | head -nl ">

# print
$Data{"procinfo"}
```

Examples

```
# set variable
<dtl set $Data{"Test1"} = "English">

# print variable
Echo: $Data{"Test1"}

# condition
<dtl if ($Text{"Lock"} ne "Lock") { $Data{"Test2"} = "Not English!"; }>

# print result
Result: $Data{"Test1"}

or

# translation test
Lock: $Text{"Lock"}

# config options
Sendmail: $Config{"Sendmail"}
```

9.2. Examples of dtl files

9.2.1. Motd.dtl

If you want to customize this file use the `~otrs/Kernel/Output/HTML/Standard/Motd.dtl` file.

```
<p>
This is the message of the day. You can edit this in Kernel/Output/HTML/Standard/Motd.dtl.
</p>
```

9.2.2. Login.dtl

This is a example of the login screen. If you want to customize this screen use the `~otrs/Kernel/Output/HTML/<THEME>/Login.dtl` file.

```
# --
# http headers
# --
Content-Type: text/html; charset=$Env{"UserCharset"};
X-Powered-By: OTRS - Open Ticket Request System (http://otrs.org)
```

```

# --
# html comment
# --

<!-- OTRS: Copyright 2002, OTRS Project. This Software is under the GPL. -->
<!--      Web: http://otrs.org/ - Lists: http://lists.otrs.org/      -->
<!--      GNU Public License: http://www.gnu.org/licenses/gpl.txt  -->

# --
# set some html variables
# --
<dtl set $Env{"BGCOLOR"} = "#BDDDF" >
<dtl set $Env{"BGTableColor0"} = "#000000" >
<dtl set $Env{"BGTableColor1"} = "#FFFFFF" >
<dtl set $Env{"BGTableColor2"} = "#EEEEEE" >
<dtl set $Env{"FontColor0"} = "#000000" >
<dtl set $Env{"FontColor1"} = "#FFFFFF" >
<html>
<head>
  <title>OTRS :: $Text{"$Data{"Title"}}</title>
</head>
<!-- end header -->
<body bgcolor=$Env{"BGCOLOR"} text=$Env{"FontColor0"} >

<center>

<p>
<font color="red">$Data{"Message"}</font>
</p>

<p>
<form action=$Env{"CGIHandle"} method="post" enctype="application/x-www-form-urlencoded">
<input type="hidden" name="Action" value="Login">

<table border="0" cellspacing="0" cellpadding="3" width="240">
<tr bgcolor=$Env{"BGTableColor0"}>
  <td align="center"><font color=$Env{"FontColor1"}><b>$Text{"Welcome to OTRS"}</b></font></td>
</tr>
<tr>
  <td align="center" bgcolor=$Env{"BGTableColor1"}>
    <table cellspacing="8" cellpadding="2">
      <tr>
        <td>Username:</td>
        <td><input type="text" name="User" value=$Data{"User"} size="18"></td>
      </tr>
      <tr>
        <td>Password:</td>
        <td><input type="password" name="Password" size="18"></td>
      </tr>
    </table>
    <input type="submit" value=$Text{"Login"}>
  </td>
</tr>
</table>
</form>
</p>

# --
# Message of the day data!
# --
$Data{"Motd"}

</center>

</body>
</html>

```

9.2.3. Header.dtl

This is the default HTML header of each OTRS sides. If you want to customize this screen use the `~otrs/Kernel/Output/HTML/<THEME>/Login.dtl`

```
# --
# http headers
# --
Content-Type: text/html; charset=$Env{"UserCharset"};

# --
# html comment
# --

<!-- OTRS: Copyright 2002, OTRS Project. This Software is under the GPL. -->
<!--      Web: http://otrs.org/ - Lists: http://lists.otrs.org/      -->
<!--      GNU Public License: http://www.gnu.org/licenses/gpl.txt  -->
# --
# set some html variables
# --
<dtl set $Env{"BGCOLOR"} = "#BDDDF" >
<dtl set $Env{"BGTableColor0"} = "#000000" >
<dtl set $Env{"BGTableColor1"} = "#FFFFFF" >
<dtl set $Env{"BGTableColor2"} = "#EEEEEE" >
<dtl set $Env{"FontColor0"} = "#000000" >
<dtl set $Env{"FontColor1"} = "#FFFFFF" >
<dtl set $Env{"Box0"} = "[ ">
<dtl set $Env{"Box1"} = "]">
# --
# check refresh
# --
<dtl if ($Data{"Refresh"} ne "") { $Data{"MetaHttpEquiv"} = "<meta http-equiv='refresh' content='$Data{"Refresh"}'" >
# --
<html>
<head>
    <title>OTRS :: $Text{"$Data{"Title"}}</title>
</head>
<!-- end header -->
```

9.3. Create a new theme

To create a new theme, create a new theme directory (`mkdir ~otrs/Kernel/Output/HTML/NewTheme/`). Copy an existing theme into the new directors (`cp ~otrs/Kernel/Output/HTML/Standart/*.dtl ~otrs/Kernel/Output/HTML/NewTheme/`).

Modify the dtl files like you want.

Add a new database entry for this theme. You have to do this via SQL.

```
shell:~> mysql -u root -p some-pass otrs
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1 to server version: 3.23.48-log

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> INSERT INTO theme
->      (theme, valid_id, create_by, change_by, change_time)
->      VALUES
->      ('NewTheme', 1, 1, 1, current_timestamp);
mysql>
```

Ready. Goto the preferences page and change your theme.

Chapter 10. Generic-Agent

The Generic-Agent is an command line program wich can do some actions (like move, add note, set state, set owner) on tickets.

10.1. Config File

Kernel/Config/GenericAgent.pm is the default config file which must be copied (cp Kernel/Config/GenericAgent.pm.dist Kernel/Config/GenericAgent.pm).

10.2. Examples

Now we want to go through a few examples. There is also a example config file (Kernel/Config/GenericAgent.pm.examples).

Here all possible options:

```
'name of job' => {
  # get all tickets with this properties
  Queue => 'system queue',
  States => ['new', 'open'],
  Locks => ['unlock'],
  # or escalation tickets
  Escalation => 1,

  # new ticket properties (no option is required, use just the options
  # witch should be changed!)
  New => {
    # new queue
    Queue => 'new system queue',
    # possible states (closed successful|closed unsuccessful|open|new|removed)
    State => 'closed successful',
    # new ticket owner (if needed)
    Owner => 'root@localhost',
    # if you want to add a Note
    Note => {
      From => 'GenericAgent',
      Subject => 'Your subject!',
      Body => 'Some comment!',
      ArticleType => 'note-internal', # note-internal|note-external|note-report
    },
    # your program (/path/to/your/program) will be executed like
    # "/path/to/your/program $TicketNumber $TicketID" ARG[0] will
    # be the ticket number and ARG[1] the ticket id
    CMD => '/path/to/your/program',
    # DELETE ticket from database and filesystem
    Delete => 1,
  },
},
```

10.2.1. close spam tickets

If you get spam tickets in your system and you want spend much time on it, create a queue (named spam) and just move the spam tickets into this queue. If the bin/GenericAgent.pl runs, all open tickets in the queue spam will be closed by the bin/GenericAgent.pl.

Exampe for Kernel/Config/GenericAgent.pm

```
[...]
# --
# [name of job] -> close all tickets in queue spam
# --
'close spam' => {
  # get all tickets with this properties
  Queue => 'spam',
  States => ['new', 'open'],
```

```

Locks => ['unlock'],
# new ticket properties (no option is required, use just the options
# witch should be changed!)
New => {
  # new queue
  Queue => 'spam',
  # possible states (closed successful|closed unsuccessful|open|new|removed)
  State => 'closed successful',
  # new ticket owner (if needed)
  Owner => 'root@localhost',
  # if you want to add a Note
  Note => {
    From => 'GenericAgent',
    Subject => 'spam!',
    Body => 'Closed by GenericAgent.pl because it is spam!',
  },
},
},
[...]
```

10.2.2. delete tickets

If you want to delete (means delete ticket from database and filesystem) a ticket from a queue use this.

Exampe for Kernel/Config/GenericAgent.pm

```

[...]
```

```

# --
# [name of job] -> close and delete all tickets in queue delete
# --
'delete' => {
  # get all tickets with this properties
  Queue => 'delete',
  States => ['new', 'open'],
  Locks => ['unlock'],
  # new ticket properties (no option is required, use just the options
  # witch should be changed!)
  New => {
    # DELETE!
    Delete => 1,
  },
},
[...]
```

10.2.3. move tickets from tricky to experts

Moved ticket from tricky to experts queue and add note.

Exampe for Kernel/Config/GenericAgent.pm

```

[...]
```

```

# --
# [name of job] -> move all tickets from tricky to experts
# --
'move tickets from tricky to experts' => {
  # get all tickets with this properties
  Queue => 'tricky',
  States => ['new', 'open'],
  Locks => ['unlock'],
  # new ticket properties
  New => {
    Queue => 'experts',
    Note => {
      From => 'GenericAgent',
      Subject => 'Moved!',
      Body => 'Moved from "tricky" to "experts" because it was not possible to find a sollution!',
    },
  },
},
[...]
```

```

        ArticleType => 'note-internal', # note-internal|note-external|note-report
    },
},
},
[...]
```

10.2.4. move escalation ticket to experts and execute CMD

If there is a escalation ticket, move it to experts and execute a command.

Exampe for Kernel/Config/GenericAgent.pm

```

[...]
```

```

# --
# [name of job] -> move all tickets from xyz to experts
# --
'move escalation ticket to experts and execute CMD' => {
    # get all tickets with this properties
    Queue => 'xyz',
    Escalation => 1,
    # new ticket properties
    New => {
        Queue => 'experts',
        # your program (/path/to/your/program) will be executed like
        # "/path/to/your/program $TicketNumber $TicketID" ARG[0] will
        # be the ticket number and ARG[1] the ticket id
        CMD => '/path/to/your/program',
    },
},
[...]
```


Chapter 11. Performance Tuning

An exhaustive list of various techniques you might want to use to get the most performance possible out of your OTRS system: configuration, coding, memory use and more.

11.1. OTRS

There are several options to improve the performance via OTRS.

11.1.1. TicketIndexModule

You have three backend modules for the ticket index.

Kernel/Config.pm

```
[...]
    $Self->{TicketIndexModule} = 'Kernel::System::Ticket::IndexAccelerator::RuntimeDB';
[...]
```

- Kernel::System::Ticket::IndexAccelerator::RuntimeDB (default), generate each queue view on the fly from ticket table. You will not have performance trouble till ~ 50.000 tickets in your system.
- Kernel::System::Ticket::IndexAccelerator::FS, write the shown tickets in a file. Use bin/RebuildTicketIndex.pl for initial index building.
- Kernel::System::Ticket::IndexAccelerator::StaticDB, the most powerfull module, it should be used over 80.000 tickets in a system - use a extra ticket_index table, works like a view. Use bin/RebuildTicketIndex.pl for initial index building.

11.1.2. TicketStorageModule

You have two backend modules for the ticket/article storage .

Kernel/Config.pm

```
[...]
    $Self->{TicketStorageModule} = 'Kernel::System::Ticket::ArticleStorageDB';
[...]
```

- Kernel::System::Ticket::ArticleStorageDB (default), store attachments and co into the database. Note: Don't use it for larger setups.

Pro: If your webserver user isn't the otrs user, use this module to have no file permission problems.

Contra: It's not really nice to store attachments in your database. Take care that your database is able to store large objects.

E. g. MySQL (config) "set-variable = max_allowed_packet=8M" to store 8 MB objects (default is 2M).

- Kernel::System::Ticket::ArticleStorageFS, store attachments and co in local file system. Note: Use it for larger setups.

Pro: Faster!

Contra: Your webserver user should be the otrs user (file system permissions!).

11.2. Database

This depends on your used database. If you have trouble, go to read your docu of your used database or ask your database admin.

11.3. Webserver

Of course you should use mod_perl (<http://perl.apache.org/>). It's much faster (~ * 100) then pure cgi. But needs more RAM. So your httpd with mod_perl will be about 16 MB (~10MB shared). And you can have establish datababase connections on process startup (httpd). This saves also time (see README.webserver).

If you have a really large installation (over 1000 new tickets a day and over 40 Agents) is a good idea to read "Choosing the Right Strategy" (<http://perl.apache.org/docs/1.0/guide/strategy.html>).

Anyway, if your bandwidth is a little bit small use mod_gzip (http://www.schroepl.net/projekte/mod_gzip/). If you have a html page with 45k, mod_gzip compress it. The page will be about 7k. That's really nice.

Chapter 12. Troubleshooting

We split this section into different parts per distribution. Of course you can set up your own system with your own linux system. But please understand that we can not provide any support for that. OTRS is much to complicated and has to many links to other components of the system that we are lucky to have access to mechanisms like RPM. We will try to support as many platforms as possilbe but time is a valuable resource. ;-)

12.1. General problems with OTRS on SuSE Linux

The very first step should be a visit to <http://www.suse.de/de/support/download/updates/> which is the page where you can find the latest patches and updates for your SuSE Linux. Please check especialy for fixes about Apache, MySQL, Perl and of course OTRS. YaST2 users should be able to use the Yast Online Update mechanism. Otherwise download the rpm files and deinstall the old package with "rpm --nodeps -e otrs" and install them th new with "rpm -i foo.rpm"

The second step should be a visit to the *OTRS Homepage*(<http://www.otrs.org/>). We will provide the very latest fixes and howtos there.

The third step is writting an e-mail to the developer team of OTRS. We will be more than happy to provide you with any support you need.

12.1.1. SuSE Linux 8.0

Unfortunately the otrs.rpm which is on the SuSE 8.0 distribution is a buggy one (it was not a SuSE mistake). Please download the newest version from our Homepage(<http://www.otrs.org/>) and install it with YaST or manually by

```
# deinstall old package
shell> rpm --nodeps -e otrs
# install new package
shell> rpm -i new-otrs.rpm
```

12.1.2. SuSE Linux and Postfix

Postfix isn't configured with Procmail out of the box. You have to enable Procmail in /etc/postfix/main.cf:

```
[...]
mailbox_command = /usr/bin/procmail
[...]
```

And to restart the Postfix daemon (rcpostfix restart).

12.2. General problems with OTRS on other distributions (e.g. Redhat)

Frankly we have not tried to install it on a Redhat yet. It should be a problem but there is no ready to use RPM. We are working on it. Same for other distributions.

12.3. Problems with Apache

Most people who have problems with the Apache did build their own very special Apache. Of course you are welcome to do so but in case you run into trouble we suggest to your the vanilla version which is provided by your favorite distribution.

12.3.1. Internal Server Error

In this case check the syntax of the index.pl file to find the error:

```
shell:~ # cd ~otrs
```

It's important to be in the \$HOME of the otrs user.

```
shell:/opt/OpenTRS # perl -cw bin/cgi-bin/index.pl
bin/cgi-bin/index.pl syntax OK
shell:/opt/OpenTRS #
```

If you get an error message, in most cases you have to install missing perl modules from CPAN(<http://www.cpan.org/>).

Install CPAN modules via cpan shell:

```
shell:~ # perl -MCPAN -e shell;
-- (may you have to configure cpan first) --

cpan shell -- CPAN exploration and modules installation (v1.59_54)
ReadLine support enabled

cpan> install Digest::MD5
[installing Digest::MD5 module]
cpan>
```

Check the perl syntax again (perl -cw bin/cgi-bin/index.pl) and install further missing modules if necessary.

12.3.2. Error: Can't connect to database!

If your browser get the message "Error: Can't connect to database!" after you changed the database settings, restart the webserver. mod_perl reads the ~otrs/Kernel/Config.pm only on startup.

If the "Error: Can't connect to database!" message is still there, check the error log of your webserver (e. g. /var/log/httpd/error_log).

12.3.3. FreeBSD, PostgreSQL and Apache (install_driver(Pg) failed)

Everything is working fine just if I want to use the web interface I get always: [...] Software error: install_driver(Pg) failed: [Thu Sep 19 16:52:18 2002] index.pl: [Thu Sep 19 16:52:18 2002] index.pl: Can't load '/usr/local/lib/perl5/site_perl/5.005/i386-freebsd/auto/DBD/Pg/Pg.so' for module DBD::Pg: Shared object "libpq.so.2" not found at /usr/libdata/perl/5.00503/DynaLoader.pm line 169. [Thu Sep 19 16:52:18 2002] index.pl: [Thu Sep 19 16:52:18 2002] index.pl: [Thu Sep 19 16:52:18 2002] index.pl: at (eval 124) line 3 Perhaps a required shared library or dll isn't installed where expected at /usr/local/OpenTRS/bin/cgi-bin/../../Kernel/System/DB.pm line 67 [...]

To solve this problem, you can tell the Apache httpd.conf to include the environmental variable LD_LIBRARY_PATH=/usr/local/pgsql/lib. Put this line to httpd.conf and then restart "SetEnv LD_LIBRARY_PATH /usr/local/pgsql/lib" and then restart (source <http://lists.otrs.org/pipermail/otrs/2002-September/000248.html>).

12.4. Problems with MySQL

Please doublecheck all passwords. Mostly people setup the system with a wrong password. In this case it is the easiest way to re-setup the system.

12.4.1. Check the database connect

To check the database connect use '~otrs/bin/CheckDB.pl'. Is the output "It looks Ok!", you don't have problems with MySQL. If not, read the error message.

12.4.2. Access denied for user: 'otrs@localhost'

Check the password in Kernel/Config.pm for the database user. If you don't know the database password for the database otrs user, set it new:

```
shell> mysql -u root -p
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 37 to server version: 3.23.48-log

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

```
mysql> GRANT ALL PRIVILEGES ON otrs.* TO otrs@localhost IDENTIFIED BY "yourpw" WITH GRANT OPTION;
mysql>
```

Reload the grant tables of your mysql-daemon:

```
$shell> mysqladmin -u root -p reload
```

(or restart your mysql-daemon) and change the new otrs password in Kernel/Config.pm.

Note: If you use mod_perl, restart the webserver, because mod_perl is reading the perlcode (incl. Kernel/Config.pm) on startup.

12.4.3. Lost root password of MySQL

Follow: http://www.mysql.com/documentation/mysql/bychapter/manual_Problems.html#Resetting_permissions

12.4.4. <http://localhost/otrs/installer.pl>

If you want to set up the otrs database again, you can call the setup program by browsing to <http://localhost/otrs/installer.pl>.

Note: Just for SuSE Linux RPMs.

12.5. Problems - misc

12.5.1. Problems with receiving emails

If everything is working, but you can't see the incoming emails, check if the `~otrs/bin/PostMaster.pl` program is working correctly. Pipe an example email through the `PostMaster.pl`. There are two example emails in the default OTRS package (`~otrs/doc/test-email-*.box` or `/usr/share/doc/packages/otrs/test-email-*.box`).

Example:

```
shell:~ # cat /usr/share/doc/packages/otrs/test-email-1.box | /opt/OpenTRS/bin/PostMaster.pl
shell:~ #
```

May there is an error message, then you have to fix it. If not and you see this email in the postmaster queue, the procmail program isn't configured with your MTA (check the MTA log file, e. g. `/var/log/mail`) or the `$HOME` of the otrs user isn't correct (check `$HOME` and `$HOME/.procmailrc`).

12.5.2. Lost root password of OTRS

I lost the root password of OTRS ("Login failed! Your username or password was entered incorrectly.").

Reset of the OTRS root password:

```
shell:~ # mysql -u root -p otrs
mysql> UPDATE system_user SET pw='roK20XGbWESM' where login='root@localhost';
mysql>
```

And the password of user 'root@localhost' will be 'root'. The password is crypted like 'man 3 crypt' with `crypt()`.

Chapter 13. FAQ

1. I installed the otrs.rpm from SuSE 8.0. But it doesn't work. Why?

The default SuSE 8.0 rpm is buggy (which is not a SuSE mistake). Please visit our website(<http://www.otrs.org/>) and download the newest rpm. You can install the rpm with YaST or manually

```
rpm -Uvh otrs.rpm
```

2. What is OTRS?

OTRS is a Ticket Request System with many features to manage customer telephone calls and e-mails.

3. What stands OTRS for?

Open Trouble-Ticket Request System.

4. What does OTRS cost?

Nothing, it's GPL(<http://www.gnu.org/copyleft/gpl.txt>).

5. This document refers to agents. What is an agent in the context of OTRS?

An Agent is a human being who works with the system. User would be an alternative term.

Geeks: Of course a script could act like an agent. Feel free to do so!

6. How can I delete a user, who is no longer needed? (asked by Andreas Haase - Wed, 21 Aug 2002 11:17:01 +0200 (CEST))

OTRS is working with database id references. If you would delete a user (or queue, ...) from the database, you delete the reference info. Important infos like owner or queue.

Set the data record to invalid and the record is still visible (e. g. for ticket history, ...) but not active for the application.

7. Can OTRS receive email?

Yes, (with MIME support).

The \$HOME/bin/PostMaster.pl program receives the emails and sorts the email to the right ticket or queue.

8. Can OTRS send email?

Yes. Autoresponders per queue or per X-Header and standard responders via mouse click.

Note: You can add/delete/modify the system email addresses at AdminView::System.

9. Fulltext Index Searching?

Yes.

10. Is OTRS multi user and multi group able?

Yes, of course.

11. Is it possible to use different domains?

Yes, you can use different emails 'support@yourdomain.com', 'sales@yourdomain.com' and different domains 'marketing@clientdomain.com' with one system!

12. Can I use OTRS only with SuSE Linux?

No, but we developed it on a SuSE Linux and frankly we did not do much testing on a Redhat, Debian, ...

But we will provide additional installation informations on <http://www.otrs.org/>. And we are more than happy to receive some feedback from you about how you installed OTRS on other platforms.

13. What software will be needed?

Minimum: Perl5(<http://www.perl.com/>) (with a few CPAN(<http://www.cpan.org/>) modules, more: INSTALL), MySQL(<http://www.mysql.com>) and Apache(<http://www.apache.org>).

But again, your are on the safe side by using SuSE Linux. It will provide you with all the needed stuff.

14. How stable is OTRS?

Please be aware of the fact that you are dealing with a beta-version. New versions are announced on <http://www.otrs.org/>. But never the less it is quite a stable system and you shouldn't run in any trouble. But we can not guarentee it!

15. What hardware do I need?

We suggest an IBM s390. *SCNR* ;-)

Some of our test enviroments are Pentium II 300 with 64 MB RAM and they do a pretty good job. Of course the more RAM and the faster the CPU the better.

16. How does OTRS scale and how big can it become?

This is depending on the hardware and the enviroment you are using. At the moment OTRS is a one box system. With little work you can set up a webserver-cluster and you can split the database to a seperate box. We are planing to support some sort of clustering mechanism. But this is not the highest priority for the development.

There are OTRS installations which handle 20,000 tickets (e-mails) a day and don't show any sign of stress.

17. Can I use my nice Oracle or DB2?

At the moment we only support MySQL(<http://www.mysql.com>) as the default database. Frankly we do trust in a MySQL(<http://www.mysql.com>) as much as in a DB2 (for this application). Anybody who is willing to spend some time to port it to other databases is more than welcome to the OTRS team!

Note: The code is designed to support different databases!

18. Which programming language is used?

Perl(<http://www.perl.com/>) OO, SQL and dtl.

19. What is the default admin account?

User: root@localhost Password: root

Of course it is a very good idea to change this default password!

20. Works OTRS with mod_perl(<http://perl.apache.org/>)?

Of course.

21. Is it possible to customize OTRS?

Of course. You can customize OTRS like you want. Take advantage of the dtl (dynamic template language) to customize the OTRS frontend release independently (more: README.dtl)!

22. Can I install OTRS on a Windows box?

Theoraticly yes, but we are not the big windows gurus and haven't ever tried to set up a Windows box with an Apache(<http://www.apache.org>), Perl(<http://www.perl.com>) and MySQL(<http://www.mysql.com>). In case you tried it send us an e-mail.

23. How can I become a part of the OTRS developer community?

Welcome! Anybody who is willing to help us and has the time is more than welcome. Please send us an e-mail.

24. I do like the OTRS but would feel more comfortable by using a commercial product.

We can not help you. Sorry.

25. What browser do I need?

OTRS is working with the most browser such lynx, w3m, Netscape, Mozilla, Opera, IE and Konqueror (You don't need Java Script or Java Applets!).

26. Is it possible to generate my own ticket number format?

Yes it's possible. You can choose between four different OTRS formats. AutoIncrement ("SystemID.Counter" e. g. 1010138 or 1010139), Date ("Year.Month.Day.SystemID.Counter" e. g. 200206231010138 or 200206231010139), Random ("SystemID.Random" e. g. 100057866352 or 103745394596) and my favorite one DateChecksum ("Year.Month.Day.SystemID.Counter.CheckSum" e. g. 2002070110101520 and 2002070110101535).

Further it's possible to create a own ticket number format (like you want). See the OTRS documentation.

27. Do you support the RFC 1297?

Yes, OTRS supports this RFC.

28. Can I add my own ticket states?

Yes, but be carefully with the existing states (OTRS needs basic states).

29. More then one OTRS on one machine?

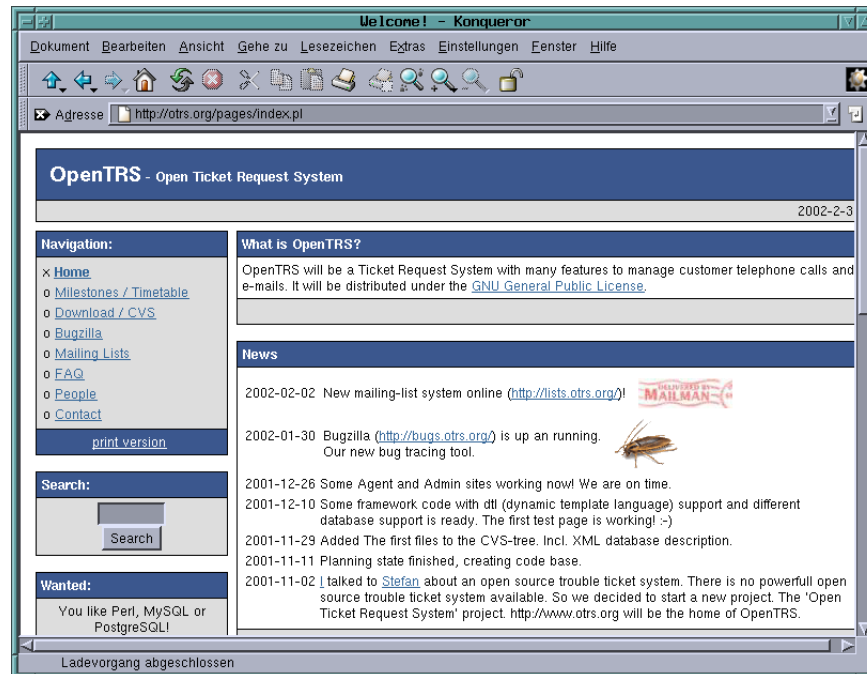
Yes, you can do that. Just install the second, third, ... in different paths (e.g. /opt/otrs01, /opt/otrs02, /opt/otrs03, ...). And configure the webserver like README.webserver.

Appendix A. Online resources

We try to support you with the very last information about OTRS and give you a good way to provide us with your feedback.

A.1. OTRS Homepage

Our homepage can be found at <http://www.otrs.org/>.



A.2. Mailinglists

We provide three major mailinglists. `<announce@otrs.org>` is a low traffic announcement mailinglist. To subscribe it visit <http://lists.otrs.org/>.

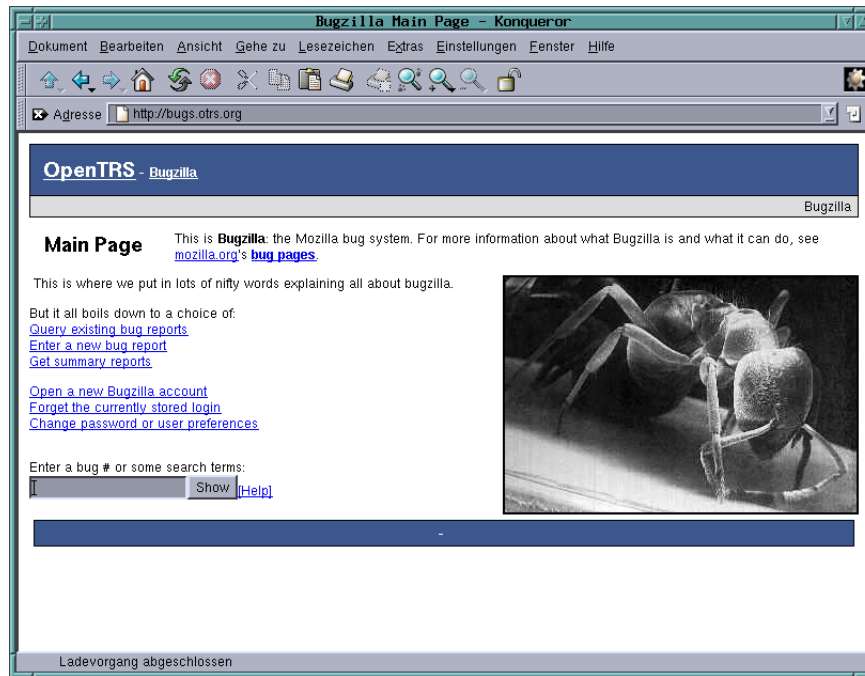
The second mailinglist is `<otrs@otrs.org>`. It is a medium to high traffic list with all sorts of questions and support to the product. To subscribe it visit <http://lists.otrs.org/>.

The third mailinglist is `<dev@otrs.org>`. It is a medium to high traffic list. The OTRS developers discuss various design and implementation issues here. To subscribe it visit <http://lists.otrs.org/>.

A.3. Bugtracking

Real geeks don't need a bugtracking tool! ;-)

Just kidding. To submit bugs visit <http://bugs.otrs.org/>. We know sometimes bugzilla isn't that comfortable but right now it is the best bug tracking system we've found.



By reporting bugs you do help us very much. We appreciate your help!

Appendix B. The OTRS core team

OTRS was created in the third or fourth quarter of the year 2001 (nobody remembers the exact date). In those glory days the core team consisted of Martin Edenhofer and Stefan Wintermeyer.

B.1. Martin Edenhofer

>>

E-Mail: [<martin@otrs.org>](mailto:martin@otrs.org)
Homepage: <http://martin.edenhofer.de/>

Without Martin the otrs wouldn't exist. He is a brilliant coder. We will insert some more information about Martin sometime. He is just to shy. :-)

B.2. Stefan Wintermeyer

>>

E-Mail: [<stefan@otrs.org>](mailto:stefan@otrs.org)
Homepage: <http://www.wintermeyer.de/>

Here is his "official" vita (German version only):

Stefan Wintermeyer arbeitet seit dem ersten ZX81 Selbstbausatz mit Computern. 1994 kam seine Leidenschaft für Linux dazu, die ihn schließlich 1998 zur SuSE Linux AG brachte. Als Vice President Support der SuSE Linux AG setzte er sich für eine größere Verbreitung und Benutzerfreundlichkeit von Linux ein und unterstützt konsequent echte Linuxlösungen im unternehmerischen Einsatz. Aus seinem Engagement bei der SuSE Linux AG blieb ihm die Vorliebe für die gleichnamige Distribution. Seit Juni 2001 arbeitet er bei der Lufthansa Systems in Frankfurt und betreut dort den Einsatz von Linux in verschiedenen Projekten. Stefan Wintermeyer setzt sich nachhaltig für die Verwendung offener Standards ein und propagiert Linux als das Betriebssystem für Server und Thin Clients.

B.3. Sebastian Wormser

>>

E-Mail: [<sibbi@sibbi.com>](mailto:sibbi@sibbi.com)
Homepage: <http://sibbi.org/>
joined the team: 01.05.2002

We are very happy that Sebastian Wormser (Sibbi) finally joined our team. We have worked on a commercial trouble ticket system in the past (the stts at SuSE(<http://www.suse.de/>) - IBM Case Study on SuSE(<http://www.ibm.com/software/success/cssdb.nsf/CS/NAVO-56G3KU?OpenDocument=software>) / German Linux magazin(<http://www.linux-magazin.de/ausgabe/2001/04/stts/stts.html>)). So it is sort of a reunion but for an open source and total new (probably better) version.

Appendix C. Credits

As most open source projects we have to thank many people for their help. This is a non-complete list of those folks:

Martin Scherbaum, Carsten Gross, Harald Müller, Stefan Schmidt, Milisav Radmanic, Uli Hecht, Norman Walsh, Heiko Baumann, Atif Ghaffar, Pablo Ruiz Garcia, Dan Rau, Christoph Kaulich, Mark Jackson, Diane Shieh, Bernard Choppy, Carl Bailey, Phil Davis, Edwin D. Vinas, Lars Müller, Bryan Fullerton, Vladimir Gerdjikov, Fred van Dijk, Sebastien Guilbaud, Wiktor Wodecki, Arnold Ligtoet, Antti Kämäräinen, Nicolas Goralski;

And we appreciate all the help and assistance on the OTRS mailinglists. Thank you! :-)

mirrors

The project pretty soon reached a point where our ftp server didn't have enough bandwidth to serve the demand. Here is a list of people who rescued us by setting up mirrors. We appreciate your help!

Nils Jeppe (mirror Hamburg), Bryan Fullerton (ftp.samurai.com), Eberhard Moenkeberg (ftp.gwdg.de)

Appendix D. RFC 1297

Many people do not have an idea what a trouble ticket system is and why you may need one. The *RFC 1297* (<http://www.faqs.org/rfcs/rfc1297.html>) is a good start to get an overview.

RFC 1297

PURPOSES OF A NOC TROUBLE TICKET SYSTEM

A good Network Operations Trouble Ticket System should serve many purposes:

1) **SHORT-TERM MEMORY AND COMMUNICATION ("Hospital Chart").** The primary purpose of the trouble ticket system is to act as short-term memory about specific problems for the NOC as a whole. In a multi-operator or multi-shift NOC, calls and problem updates come in without regard to who worked last on a particular problem. Problems extend over shifts, and problems may be addressed by several different operators on the same shift. The trouble ticket (like a hospital chart) provides a complete history of the problem, so that any operator can come up to speed on a problem and take the next appropriate step without having to consult with other operators who are working on something else, or have gone home, or are on vacation. In single-room NOCs, an operator may ask out loud if someone else knows about or is working on a problem, but the system should allow for more formal communication as well.

2) **SCHEDULING and WORK ASSIGNMENT.** NOCs typically work with many simultaneous problems with different priorities. An on-line trouble ticket system can provide real time (or even constantly displayed and updated) lists of open problems, sorted by priority. This would allow operators to sort their work at the beginning of a shift, and to pick their next task during the shift. It also would allow supervisors and operators to keep track of the current NOC workload, and to call in and assign additional staff as appropriate.

It may be useful to allow current priorities of tickets change according to time of day, or in response to timer alerts.

3) **REFERRALS AND DISPATCHING.** If the trouble ticket system is thoroughly enough integrated with a mail system, or if the system is used by Network Engineers as well as Network Operators, then some problems can be dispatched simply by placing the appropriate Engineer or Operator name in an "assigned to" field of the trouble ticket.

4) **ALARM CLOCK.** Typically, most of the time a trouble ticket is open, it is waiting for something to happen. There should almost always be a timer associated with every wait. If a ticket is referred to a phone company, there will be an escalation time before which the phone company is supposed to call back with an update on the problem. For tickets referred to remote site personnel, there may be other more arbitrary timeouts such as

"Monday morning". Tickets referred to local engineers or programmers should also have timeouts ("Check in a couple of days if you don't hear back from me"). A good trouble ticket system will allow a timeout to be set for each ticket. This alarm will generate an alert for that ticket at the appropriate time. Preferably, the system should allow text to be attached to that timer with a shorthand message about what the alert involves ("Remind Site: TT xxx") (The full story can always be found by checking the trouble ticket). These alerts should feed into the NOC's standard alert system.

The Alarm Clock can also assist (or enforce!) administrative escalation. An escalation timer could automatically be set based on the type of network, severity of the problem, and the time the outage occurred.

5) **OVERSIGHT BY ENGINEERS AND CUSTOMER/SITE REPRESENTATIVES.** NOCs frequently operate more than one network, or at least have people (engineers, customer representatives, etc) who are responsible for subsets of the total network. For these individual representatives, summaries of trouble tickets can be filtered by network or by node, and delivered electronically to the various engineers or site representatives. Each of these reports includes a summary of the previous day's trouble tickets for those sites, a listing of older trouble tickets still open, and a section listing recurrent problems. These reports allow the site reps to keep aware the current outages and trends for their particular sites. The trouble ticket system also allows network access to the details of individual trouble tickets, so those receiving the general reports can get more detail on any of their problems by referencing the trouble ticket number.

6) **STATISTICAL ANALYSIS.** The fixed-form fields of trouble tickets allow categorizations of tickets, which are useful for analyzing equipment and NOC performance. These include, Mean Time Between Failure and Mean Time to Repair reports for specific equipment. The fields may also be of use for generating statistical quality control reports, which allow deteriorating equipment to be detected and serviced before it fails completely. Ticket breakdowns by network a NOC costs to be apportioned appropriately, and help in developing staffing and funding models. A good trouble ticket system should make this statistical information in a format suitable for spreadsheets and graphics programs.

7) **FILTERING CURRENT ALERTS.** It would be possible to use network status information from the trouble ticket system to filter the alerts that are displayed on the alert system. For instance, if node XXX is known to be down because the trouble ticket is currently open on it, the alert display for that node could automatically be acknowledged. Trouble tickets could potentially contain much further information useful for expert system analysis of current network alert information.

8) **ACCOUNTABILITY ("CYA"), FACILITATING CUSTOMER FOLLOW-THROUGH, AND NOC IMAGE).** Keeping user-complaint tickets facilitates the kind of follow through with end-users that generates happy clients (and good NOC image) for normal trouble-fixing situations. But also, by their nature, NOCs deal with crises; they occasionally find themselves with major outages, and angry users or administrators. The trouble ticket system documents the NOC's (and the rest of the organization's) efforts to solve problems in case of complaints.

Of course we added many features to the OTRS which are not mentioned in this RFC. And we will add many features.

Anyhow we are keen on your feedback. Please do not hesitate to send us an e-mail to [<feedback@otrs.org>](mailto:feedback@otrs.org)

Your OTRS core team

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Version 1.1, March 2000

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