

OpenTRS - Manual

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OpenTRS - Manual

by Martin Edenhofer and Stefan Wintermeyer

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Dedication

This manual is dedicated to the nice folks of *Cafe Lucas*(<http://www.cafe-lucas.de/>) and *Echilada*(<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.

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Foreword

Please be aware of the fact that this document is in an alpha phase!!!

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

Many people do not have an idea what a trouble ticket system is and why you may need one. We will try to give you an idea about it in this document and want to refer to *RFC 1297*(<http://www.faqs.org/rfcs/rfc1297.html>):

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.

Chapter 1. Install - The quick way.

This install way is intended for *SuSE Linux*(<http://www.suse.de/>) users. For other distributions please have a look at <http://www.otrs.org/>.

Install the `otrs.rpm` with YaST (YaST2) or `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. In case you use YaST you will not have troubles because YaST will tell you what packages have to be installed.

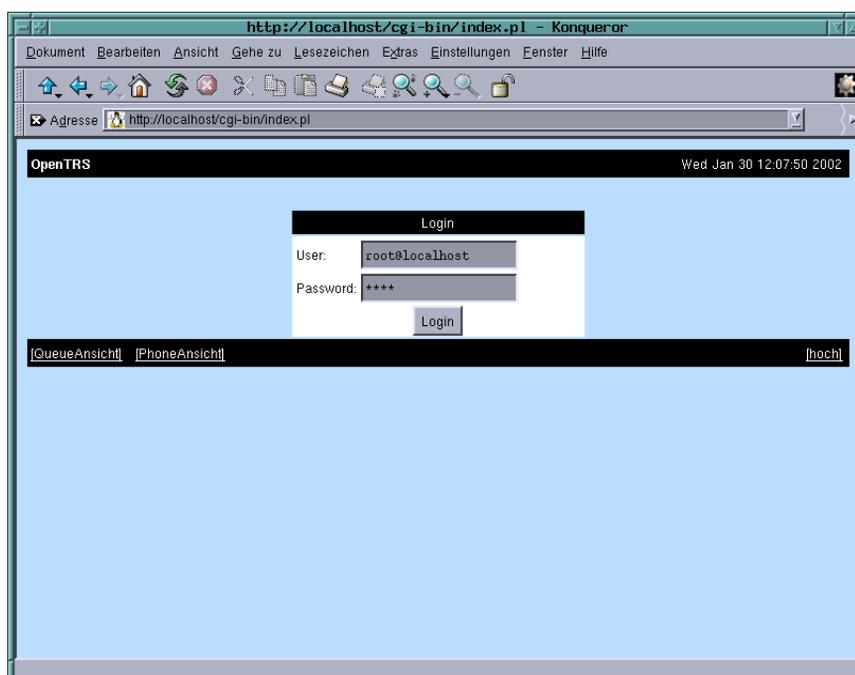
Once you installed the `otrs.rpm` in your system you have to reload the apache by `rcapache reload` to force him to reload the config file.

```
skywalker:~ # rcapache reload
PERL PHP4 Python Reload httpd                               done
```

Of course you have to have started the mysql database allready (please see the mysql docu for help). After that you have to start `otrs` with `rcotrs start`

```
skywalker:~ # rcotrs start
Starting OpenTRS
Starting mysql ... done.
Checking database connect... (It looks Ok!).
Checking otrs spool dir... done.
Starting httpd ... done.
```

Than fire up your favorite webbrowser and have a look at <http://localhost/cgi-bin/index.pl>

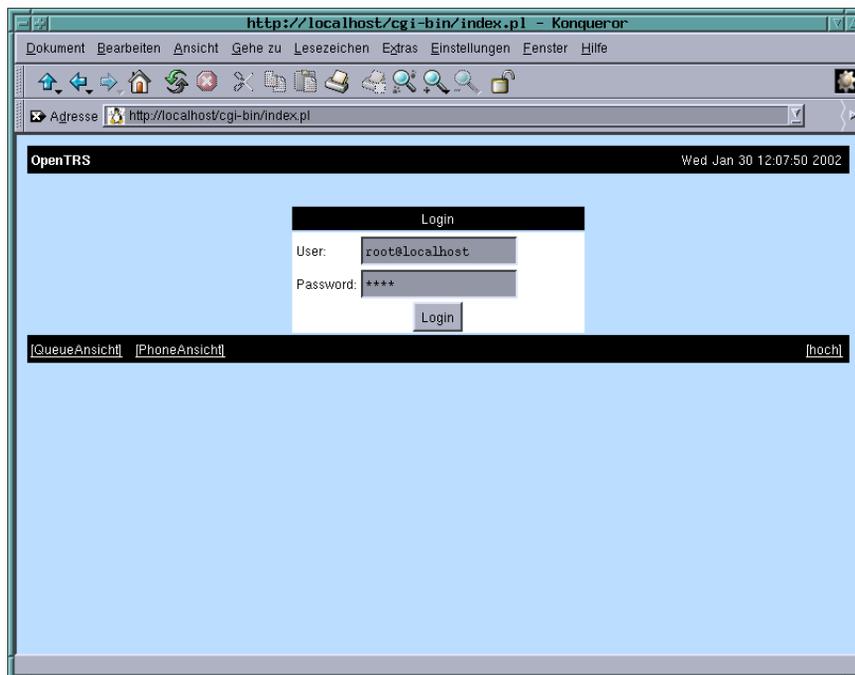


In case you have problems to install OpenTRS please have a look into the troubleshooting section.

Chapter 2. First steps

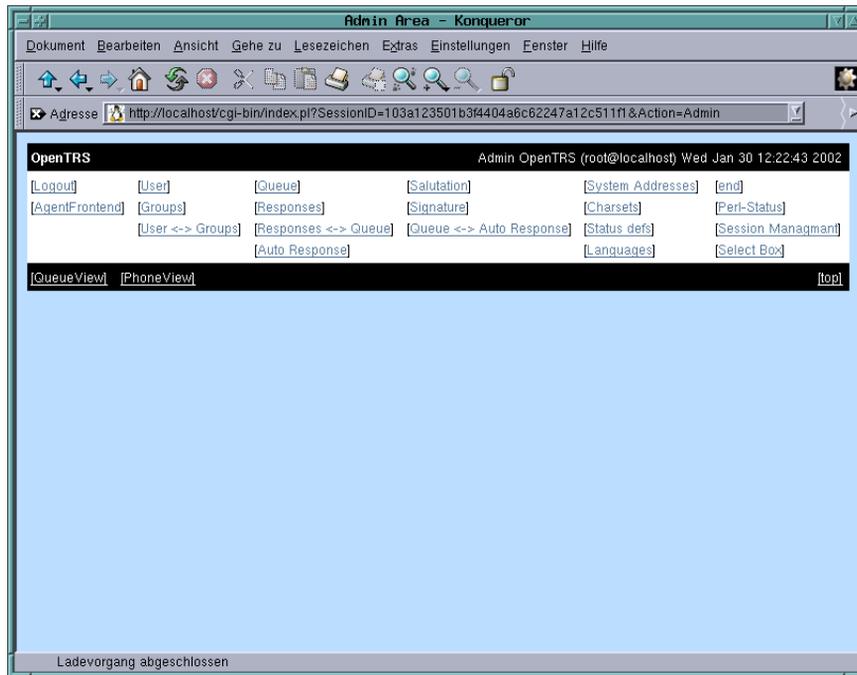
Let's presume that you have an installed OpenTRS system on your system and of course you do not want to waste too much time and see quick results.

First you have to start your favorite web browser and have a look at <http://localhost/cgi-bin/index.pl>

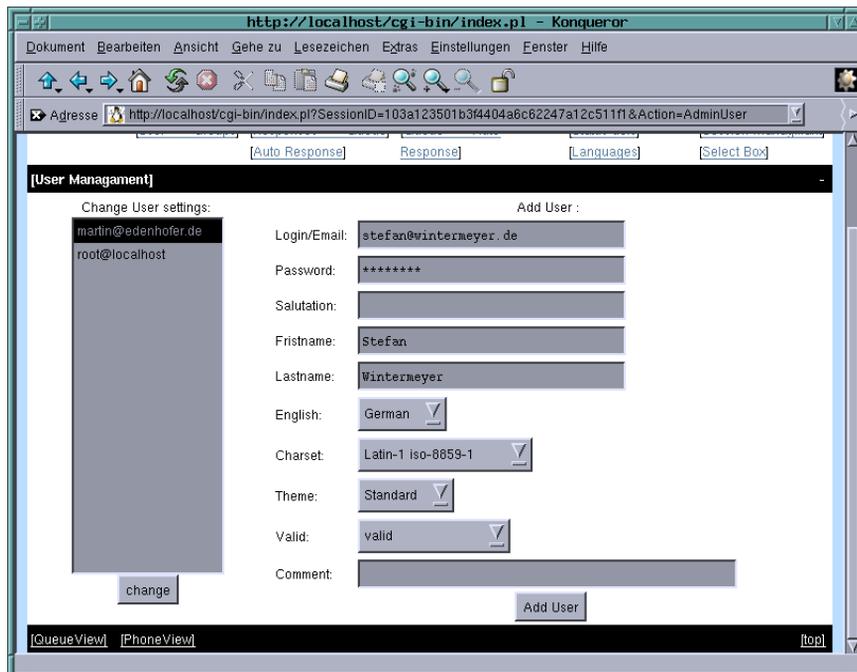


Login as root@localhost who has the password root. Please change this in the admin part asap (of course it is totally independent from your normal root account).

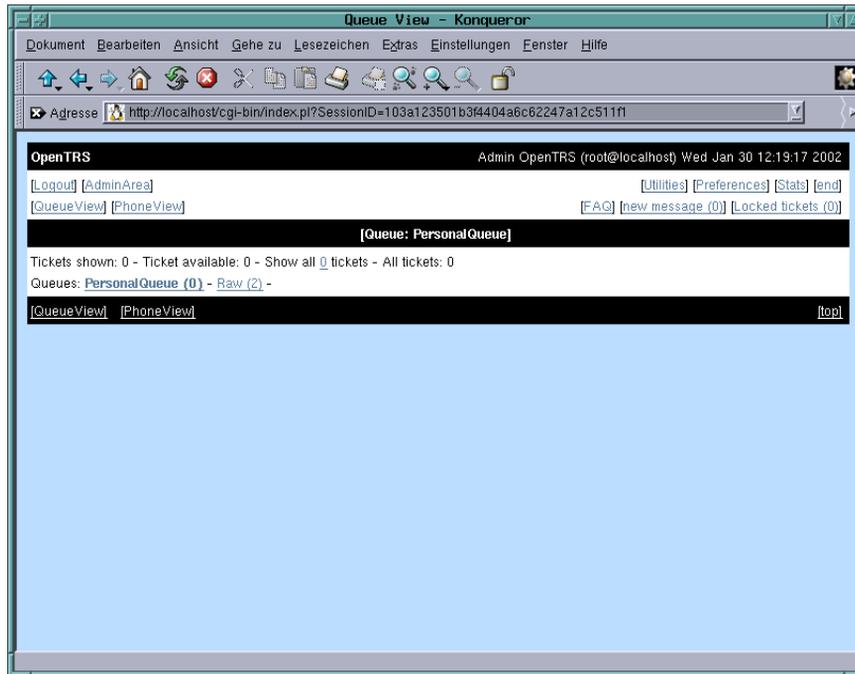
You are the root of OpenTRS now. That means you can do everything! You have the power you are admin of the system. Normally you don't want to work as root and of course you need an account for all agents. So the first thing is to go into the admin interface.



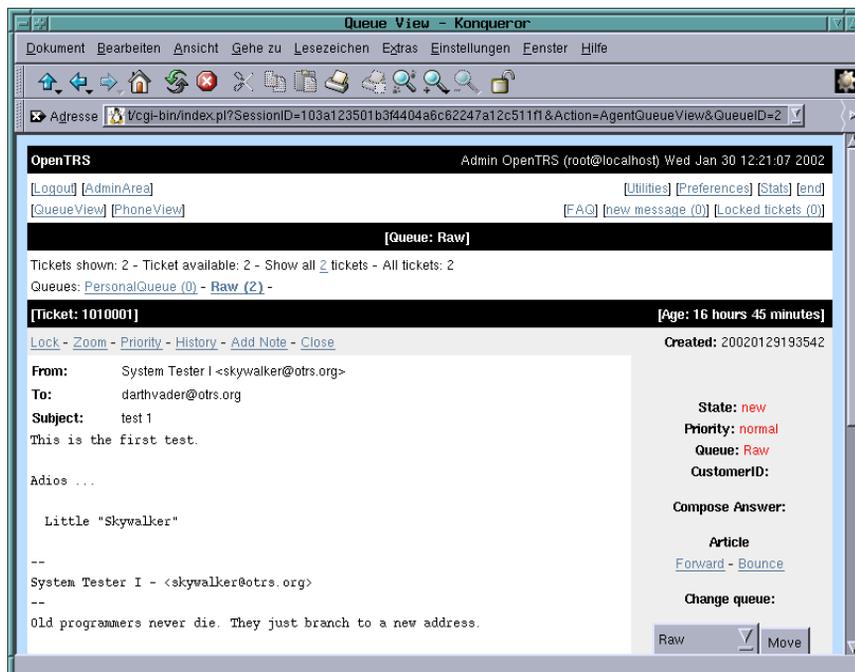
The admin interface is the central of your power. You can create and delete users, groups, queues and all sort of usefull stuff here. Browse around and give it a try. But for now we want to create a new user.



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 browser the queue by simply clicking on the link with the queue name.



Chapter 3. 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. OpenTRS is much to complecated 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. ;-)

3.1. General problems with OpenTRS 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 OpenTRS. YaST2 users should be able to use the Yast Online Update mechanism. Otherwise download the rpm files and install them with `rpm -Uvh foo.rpm`

The second step should be a visit to the *OpenTRS 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 OpenTRS. We will be more than happy to provide you with any support you need.

3.2. General problems with OpenTRS 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.

3.3. 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.

Chapter 4. FAQ

1. This document refers to agents. What is an agent in the context of OpenTRS?

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!

2. Can I use OpenTRS 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 OpenTRS on other platforms.

3. How stable is OpenTRS?

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 guarantee it!

4. What hardware do I need?

We suggest an IBM OS/390. *SCNR* ;-)

Some of our test environments 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.

5. How does OpenTRS scale?

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

6. Can I use my nice Oracle or DB2?

At the moment we only support MySQL as a database. Frankly we do not trust in a MySQL as much as in a DB2 (for this application). Anybody who is willing to send some time to port it to other databases is more than welcome to the OpenTRS team!

7. Can I install OpenTRS 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, Perl and MySQL.

8. I did everything the right way, but it does not work. Why?

Do not panic!

We tried our very best to make a simple and smooth installation procedure. But of course as with any old style open source project we know how to install our software and sometimes we forget to update our documentation. Please do not hesitate do send us an e-mail!!!

9. How can I become a part of the OpenTRS developer comunity?

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

10. I do like the OpenTRS but would feel more comfortable by using a commercial product.

We can not help you. Sorry.

11. Do you support the RFC 1297?

Yes, OpenTRS supports this RFC.

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Appendix A. The OpenTRS core team

OpenTRS was created in the third or fourth quarter of the year 2001 (nobody remembers the exact date). The core team consists of Martin Edenhofer and Stefan Wintermeyer.

A.1. Martin Edenhofer

male

we will insert some information when time comes but go a head and visit his homepage at <http://martin.edenhofer.de/>

A.2. Stefan Wintermeyer

male

we will insert some information when time comes but go a head and visit his homepage at <http://www.wintermeyer.de/>

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Version 1.1, March 2000

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