

Ticket Systems

Learning Objectives

The learning objectives in the tutorial are:

- Installing a ticketing system on the cloud server
- Performing some basic configurations

Tools

- Znuny-6.2.1
- CentOS Stream 8 Server x86_64

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Tut 1: Tutorial (20 min)

Goal of this task is to set up Znuny. After this task, the following data should be available and stored somewhere, e.g., in a local editor, for easy access:

- `< frontendfloatingip >` - the floating ip of the frontend server
- `< otrsuserpassword >` - the password of user otrs
- `< dbuserpassword >` - the password of the database user
- `< agent >` - Znuny agent user name
- `< agentpassword >` - Znuny agent password
- `< root >` - Znuny root user
- `< rootpassword >` - Znuny root password

The `< frontendfloatingip >` can be found in the cloud administration tool cloud.gwdg.de

Install the basics:

```
$ sudo dnf install -y epel-release httpd mariadb mariadb-server
$ sudo dnf install -y cpanminus gcc dnf-plugins-core
$ sudo yum config-manager --set-enabled powertools $ sudo yum install -y nano
```

Install Znuny via RPM:

```
$ link=https://download.znuny.org/releases/RPMS/rhel/7/znuny-6.2.1-01.noarch.rpm
$ sudo yum install -y $link
```

Install required Perl Modules (i.e., complete the missing ones):

Check the underline (_) in the text

```
$ sudo yum install -y "perl(Moo)" "perl(Text::CSV_XS)" "perl(YAML::XS)"
$ sudo yum install -y "perl(ModPerl::Util)" "perl(Mail::IMAPClient)" "perl(JSON::XS)"
$ sudo yum install -y "perl(Encode::HanExtra)" "perl(Crypt::Eksblowfish::Bcrypt)"
$ sudo cpanm JavaScript::Minifier::XS CSS::Minifier::XS
```

MySQL / Maria DB needs some config modifications.

Create a new file with a text editor of your choice, e.g. nano:

Check the underline (_) in the text

```
$ sudo nano /etc/my.cnf.d/znuny_config.cnf
```

Add following content:

Check the underline (_) in the text

```
[client]
max_allowed_packet=256M
[mysqld]
innodb_file_per_table
innodb_log_file_size=256M
max_allowed_packet=256M
```

Restart the MariaDB database to apply the changes:

```
$ sudo systemctl start mariadb
```

Configure the webserver: The Apache config is already in place as you have used RPM install previously.

Enable MPM prefork module:

```
$ sudo nano /etc/httpd/conf.modules.d/00-mpm.conf
Comment "LoadModule mpm_event_module modules/mod_mpm_event.so"
Uncomment "LoadModule mpm_prefork_module modules/mod_mpm_prefork.so"
```

Znuny uses port 80 by default. You might want to check if this port is already in use using the following command and free it if necessary:

```
$ sudo netstat -tulpn | grep LISTEN
```

Once done, restart the web server to apply the changes:

```
$ sudo systemctl restart httpd
```

Enable the web server and the database to start on boot:

```
$ sudo systemctl enable mariadb httpd
```

Add otrs user to sudoers and set password < *otrsuserpassword* >:

```
$ sudo usermod -aG wheel otrs
$ sudo passwd otrs
```

Enable Znuny Cron, use *<otruserpassword>* for login:

```
$ su - otrs  
$ bin/Cron.sh start
```

Set up the database:

Log in to MySQL console as database admin user. Ensure to replace `<dbuserpassword>` in the listing below with a password of your liking and note it.

```
$ sudo mysql -uroot
```

Create a database:

```
$ CREATE DATABASE otrs CHARACTER SET utf8;
```

Create a database user (i.e, otrs), and its password ;dbuserpassword;

You need to replace the ;dbuserpassword; with 'yourpassword'

```
$ CREATE USER otrs@localhost IDENTIFIED BY <dbuserpassword>;
```

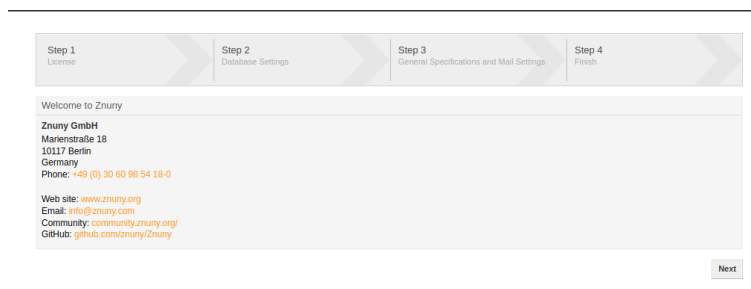
Assign user privileges to the new database and quit:

```
$ GRANT ALL PRIVILEGES ON otrs.* TO otrs@localhost;
$ FLUSH PRIVILEGES;
$ quit
```

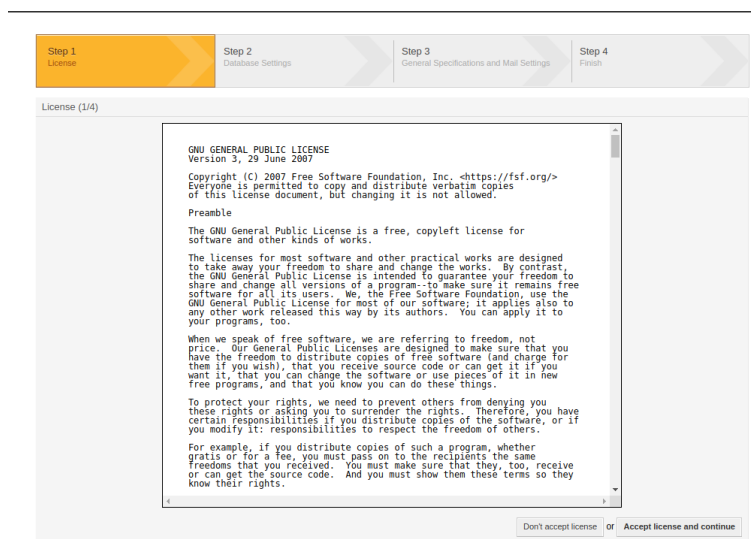
Visit `<frontendfloatingip>/otrs/installer.pl` and follow the configuration steps:

Steps

1. Click next



2. Accept license, and continue



3. Type: MySQL, install type: Use an existing database for OTRS, and click next

The screenshot shows the 'Database Selection (2/4)' screen of the OTRS installation wizard. At the top, there is a progress bar with four steps: Step 1 (License), Step 2 (Database Settings), Step 3 (General Specifications and Mail Settings), and Step 4 (Finish). Step 2 is currently active. The main content area contains a 'Type:' dropdown menu with 'MySQL' selected, and two radio buttons for 'Install Type': 'Create a new database for OTRS' (unselected) and 'Use an existing database for OTRS' (selected). A 'Next' button is located at the bottom right.

4. Configure MySQL, user: otrs, Password: < dbuserpassword >, host: 127.0.0.1, Database name: otrs, and click on database check. If it says successful then click next

The screenshot shows the 'Configure MySQL (2/4)' screen. The progress bar at the top is the same as in the previous screenshot. The main content area has four input fields: 'User:' with 'otrs', 'Password:' with '*****', 'Host:' with '127.0.0.1', and 'Database name:' with 'otrs'. Below these fields is a 'Result of database check' section showing a green checkmark and the text 'Database check successful.'. 'Back' and 'Next' buttons are at the bottom right.

5. Database setup successful!. Click next

The screenshot shows the 'Create Database (2/4)' screen. The progress bar at the top is the same. The main content area displays three green checkmarks with the following text: 'Processing otrs-schema', 'Processing otrs-initial_insert', and 'Processing post statements'. Below these is the text 'Database setup successful!' and a 'Next' button at the bottom center.

6. System Settings, no change is required click next.

Step 1 License Step 2 Database Settings Step 3 General Specifications and Mail Settings Step 4 Finish

System Settings (3/4)

SystemID: The identifier of the system. Each ticket number and each HTTP session ID contain this number.

System FQDN: Fully qualified domain name of your system.

AdminEmail: Email address of the system administrator.

Organization:

Log

LogModule: Log backend to use.

Webfrontend

Default language: Default language.

CheckMXRecord: Email addresses that are manually entered are checked against the MX records found in DNS. Don't use this option if your DNS is slow or does not resolve public addresses.

7. Mail Configuration. Skip this step

Step 1 License Step 2 Database Settings Step 3 General Specifications and Mail Settings Step 4 Finish

Mail Configuration (3/4)

Configure Outbound Mail

Outbound mail type: Select outbound mail type.

Outbound mail port: Select outbound mail port.

Configure Inbound Mail

Inbound mail type: Select inbound mail type.

Inbound mail host: Inbound mail host.

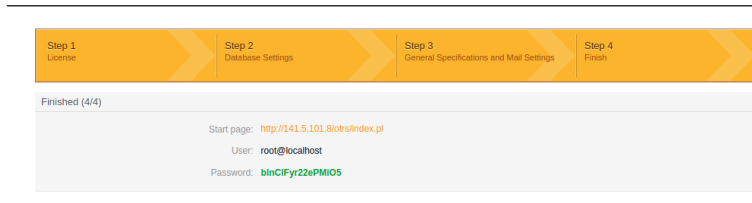
Inbound mail user: User for inbound mail.

Inbound mail password: Password for inbound mail.

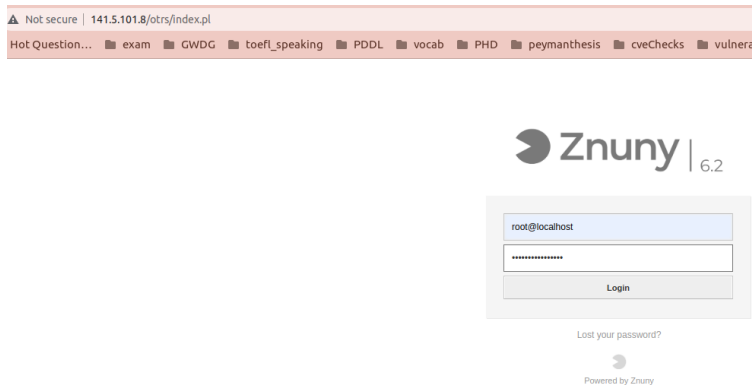
or



8. Finished, copy the password `< rootpassword >` and username `< root >`. Open the given link in new tab.



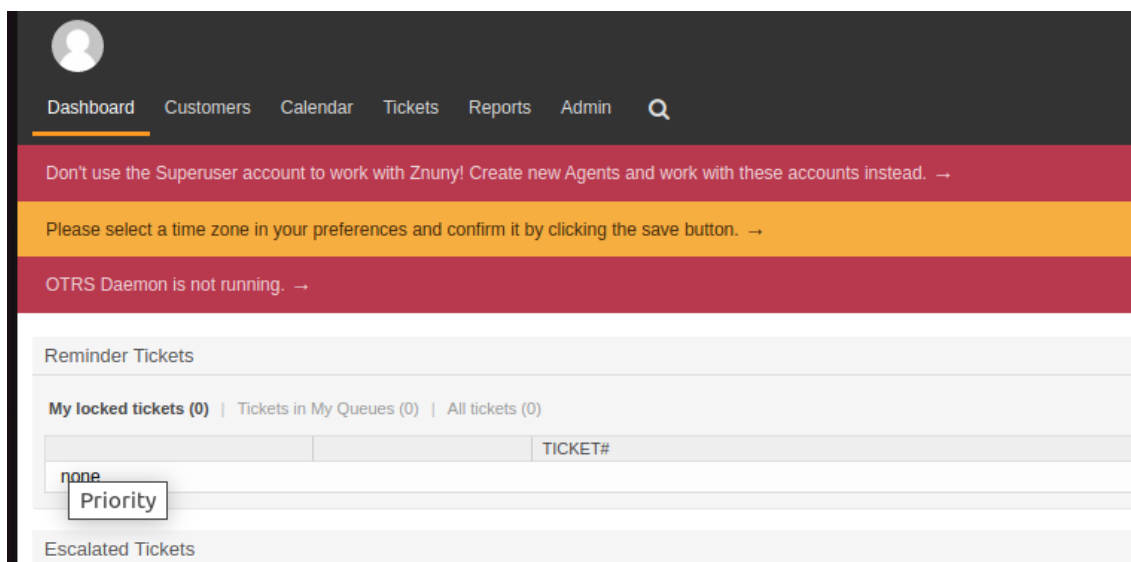
9. Agent login page. Enter the username and password from last step, and click on login. Please note that your IP address will differ from the one in the picture.



Next, configure the system.

The first page you see after login is this. Consider the **Red and Yellow/Orange notification** at the top of the page. We need to first resolve those issues by clicking on them:

- OTRS Daemon is not running.
- Time zone
- Do not use Super User account.



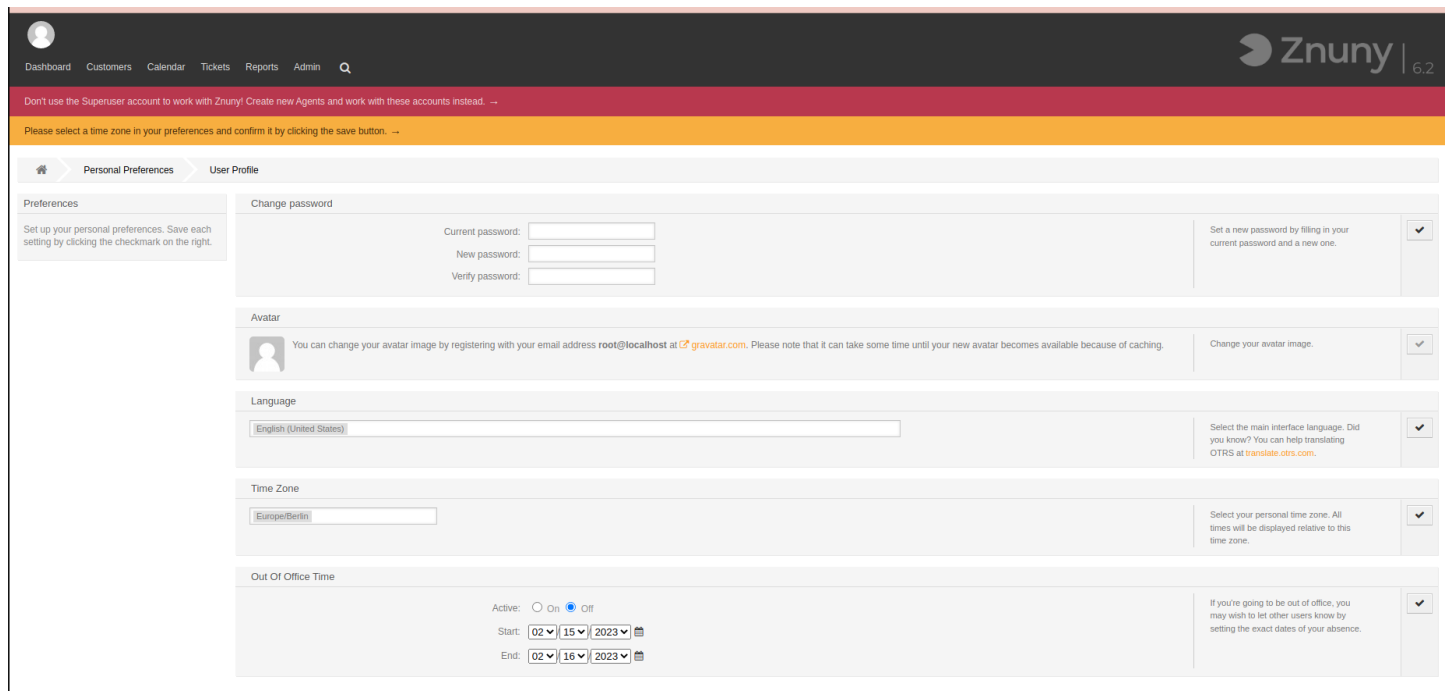
1. OTRS Daemon is not running

Please ensure you are still using otrs user:

```
$ /opt/otrs/bin/otrs.Daemon.pl stop
```

```
$ /opt/otrs/bin/otrs.Daemon.pl start
```

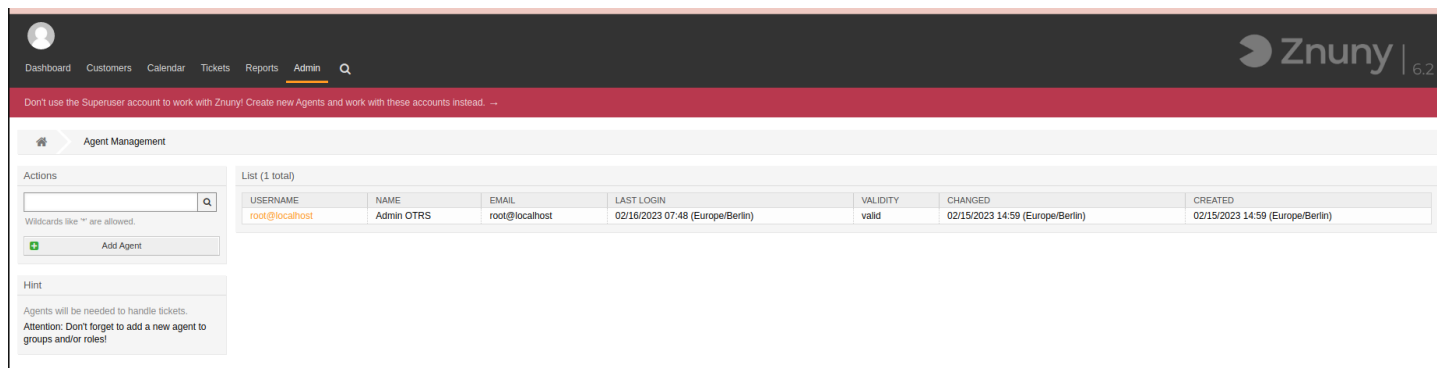
2. Please select a time zone (Berlin) in your preferences and confirm it by clicking the save button (checkmark at the end of the line).



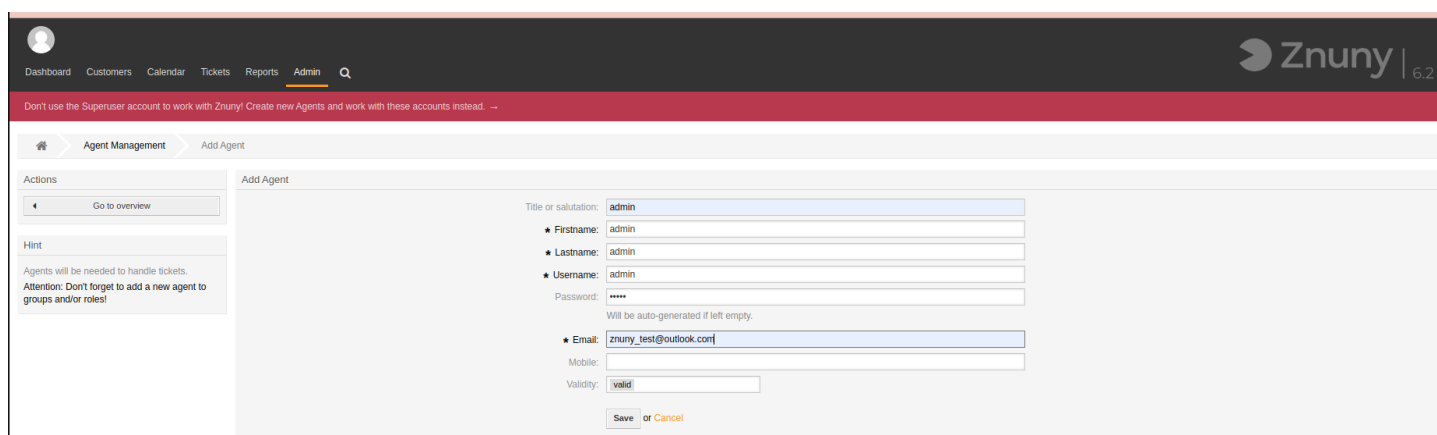
The screenshot shows the Znuzy 6.2 user interface. At the top, there is a navigation bar with 'Dashboard', 'Customers', 'Calendar', 'Tickets', 'Reports', and 'Admin'. A search icon is also present. Below the navigation bar, there is a red banner with the text: 'Don't use the Superuser account to work with Znuzy! Create new Agents and work with these accounts instead. ...'. Below that, an orange banner says: 'Please select a time zone in your preferences and confirm it by clicking the save button. ...'. The main content area is titled 'Personal Preferences' and 'User Profile'. On the left, there is a 'Preferences' sidebar with the text: 'Set up your personal preferences. Save each setting by clicking the checkmark on the right.' The main content area has five sections, each with a save button (checkmark) on the right:

- Change password:** Fields for 'Current password:', 'New password:', and 'Verify password:'. A note says: 'Set a new password by filling in your current password and a new one.'
- Avatar:** A placeholder for an avatar image. A note says: 'You can change your avatar image by registering with your email address root@localhost at gravatar.com. Please note that it can take some time until your new avatar becomes available because of caching.' A button says: 'Change your avatar image.'
- Language:** A dropdown menu showing 'English (United States)'. A note says: 'Select the main interface language. Did you know? You can help translating OTRS at translate.otrs.com.'
- Time Zone:** A dropdown menu showing 'Europe/Berlin'. A note says: 'Select your personal time zone. All times will be displayed relative to this time zone.'
- Out Of Office Time:** Radio buttons for 'Active' (unselected) and 'Off' (selected). Below are 'Start:' and 'End:' date pickers. The 'Start:' date is '02/15/2023' and the 'End:' date is '02/16/2023'. A note says: 'If you're going to be out of office, you may wish to let other users know by setting the exact dates of your absence.'

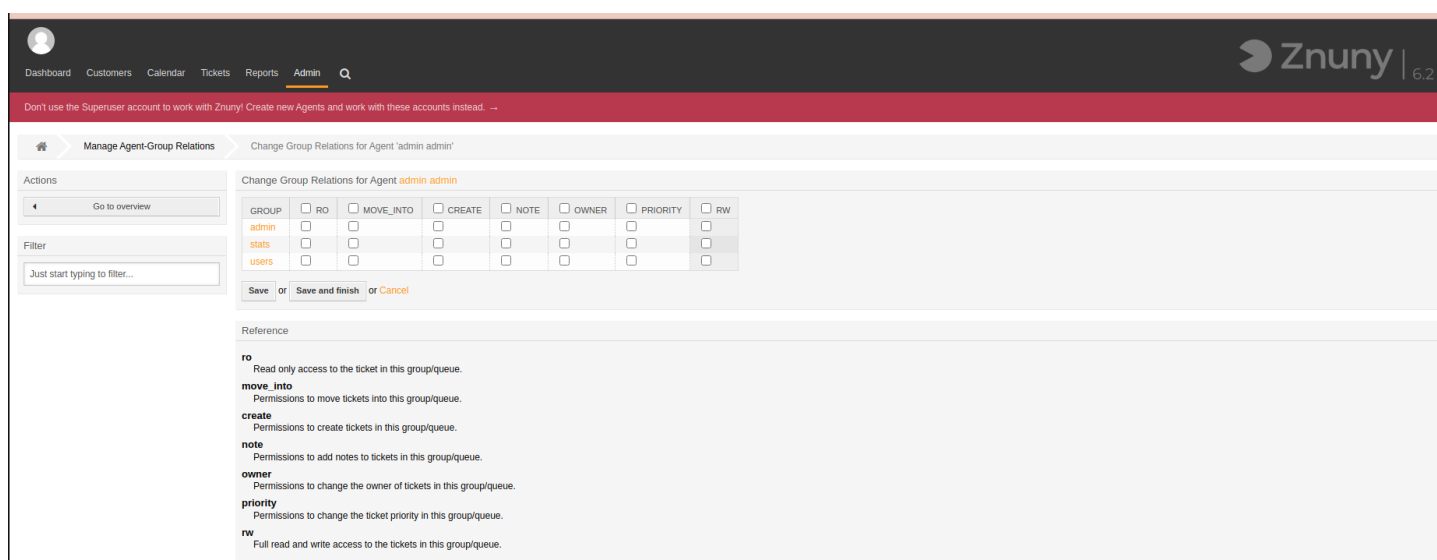
3. Don't use the Superuser account to work with Znuny! Create new Agents and work with these accounts instead



Click on add agent, and fill out the form. Make sure to take note of the login credentials < agent > and < agentpassword >.



After clicking on save, the next page is asking about the permission setting. We give it full permission by selecting all.



Later for the exercise section, we should logout (by clicking on the profile picture), and login with the new agent you have just created.

Tut 2: Tutorial (10 min)

This is a short description of the features of the Znuny web interface. You may use this as reference for the exercise.

Agent Web Interface: Overview

The Agent Web Interface consists of the following tabs

- Dashboard, Customers, Calendar, Tickets, Reports, Admin, and Search
 1. The **Dashboard** is the main page of the system, here you can get an overview about the tickets and other stuff related to the ticket activity.
 2. **Tickets** button, you will get a sub-menu with options to change the ticket's view, create a new ticket or search for a specific ticket.
 3. The **Report** (Statistics) button presents a menu that allows you to choose from an overview of the registered statistics, creating a new one or importing an existing one.
 4. The **Customers** button leads you to the Customer Management screen.
 5. By clicking the **Admin** button, you can access all of the administrator modules, which allows you to create new agents, queues, etc.
 6. There is also a **Search** button to make ticket searches.

Agent Web Interface: Dashboard

- Dashboard's widgets
 - Reminder Tickets (Tickets that are set as pending and the reminder date has been reached.)
 - Escalated Tickets (Tickets that are escalated.)
 - New Tickets (Tickets that have state New.)
 - Open Tickets / Need to be answered (Tickets that have state Open and are ready for work with them.)
- Dashboard Settings
 - It allows you to control the widgets you want to show or hide.

Agent Web Interface: Admin

In the Admin page of the OTRS web interface, an agent can add/modify agents, customers and queues, ticket and mail settings, install additional packages such as FAQ and ITSM, and much more.

- Agent Management
 - Administrators can add, change or deactivate agent accounts. Furthermore, they can also manage agent preferences, including the language and notification settings for the individual agent's interface.
- Ticket Settings
 - The statuses (predefined states) of tickets, different queues, the template for responding to a specific ticket, and so on are specified or set here.

Agent Web Interface: Admin

- Users, Groups and Roles

– OTRS supports different types of users and customers. In this section you can create or modify new users, groups, customers, and etc.

- Communication and Notifications

In this section, in "PostMaster Mail Accounts", you can configure the inbound and outbound mail setting. And in "Email Addresses" section, you can set the email for system.